



SEQUENCE LISTING

<110> MCCARTHY, Sean A
 FRASER, Christopher C
 SHARP, John D
 BARNES, Thomas S
 KIRST, Susan J
 MACKAY, Charles R
 MYERS, Paul S
 LEIBY, Kevin R
 WRIGHTON, Nicholas
 GOODEARL, Andrew
 HOLTZMAN, Douglas A



<120> NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES

<130> 210147.0066/66US

<140> Not Yet Assigned

<141> 2001-01-12

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His 785	Val	Pro	Glu	Asn	Phe 790	Ser	Leu	Glu	Leu	Thr 795	His	Ala	Thr	Pro	Ala 800
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Asn Cys Gly Pro Pro Leu Gly Thr His Ser Ser Val Gln Pro Ser Ser 1045 1050 1055

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Ile Asp Arg Glu Gln Leu Cys Gln Lys Asn Leu Asn Cys Ser Ile Glu 65 70 75 80

Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His Ile 85 90 95

Glu Val Glu Val Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser Arg 100 105 110

Ser Leu Ile Pro Ile Glu Ile Ser Glu Ser Ala Ala Val Gly Thr Arg 115 120 125

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Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile Ile Asp Glu Asn Asp 530 540

Asn Val Pro Val Val Ile Gly Pro Ala Leu Arg Asn Asn Thr Ala Glu 545 550 555 560

Ile Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe His Val Thr Arg Ile 565 570 575

Arg Ala Ile Asp Arg Asp Ser Gly Val Asn Ala Glu Leu Ser Cys Ala 580 585 590

Ile Val Ala Gly Asn Glu Glu Asn Ile Phe Ile Ile Asp Pro Arg Ser 595 600 605

Cys Asp Ile His Thr Asn Val Ser Met Asp Ser Val Pro Tyr Thr Glu 610 620

Trp Glu Leu Ser Val Ile Ile Gln Asp Lys Gly Asn Pro Gln Leu His 625 630 635 640

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Ile His Lys Gly Asp Ile Thr Leu Val Pro Thr Ile Asn Gly Thr Leu 35 40 45

Pro Ile Arg Ser His His Arg Ser Ser Pro Ser Ser Pro Thr Leu
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Leu Leu Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser Phe 115 120 125

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Asp Lys Phe Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala Gly 145 150 155 160

Asp Ser Asp Tyr Asp Leu Gly Arg Asp Ser Pro Ile Asp Arg Leu Leu 165 170 175

Gly Glu Gly Phe Ser Asp Leu Phe Leu Thr Asp Gly Arg Ile Pro Ala 180 185 190

Ala Met Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His Ser Asp 195 200 205

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Arg Ile Tyr Glu Glu Gln Arg Val Gly Ser Val Ile Ala Arg Leu Ser 35 40 45

Glu Asp Val Ala Asp Val Leu Leu Lys Leu Pro Asn Pro Ser Thr Val
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Arg Phe Arg Ala Met Gln Arg Gly Asn Ser Pro Leu Leu Val Val Asn 65 70 75 80

Glu Asp Asn Gly Glu Ile Ser Ile Gly Ala Thr Ile Asp Arg Glu Gln 85 90 95

Leu Cys Gln Lys Asn Leu Asn Cys Ser Ile Glu Phe Asp Val Ile Thr 100 105 110

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Glu 145	Ile	Ser	Glu	Ser	Ala 150	Ala	Val	Gly	Thr	Arg 155	Ile	Pro	Leu	Asp	Ser 160
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Ile Asp Arg Glu Gln Leu Cys Gln Lys Asn Leu Asn Cys Ser Ile Glu 65 70 75 80

Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His Ile 85 90 95

Glu Val Glu Val Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser Arg 100 105 110

Ser Leu Ile Pro Ile Glu Ile Ser Glu Ser Ala Ala Val Gly Thr Arg 115 120 125

Ile Pro Leu Asp Ser Ala Phe Asp Pro Asp Val Gly Glu Asn Ser Leu 130 135 140

His Thr Tyr Ser Leu Ser Ala Asn Asp Phe Phe Asn Ile Glu Val Arg 145 150 155 160

Thr Arg Thr Asp Gly Ala Lys Tyr Ala Glu Leu Ile Val Val Arg Glu
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Leu Asp Arg Glu Leu Lys Ser Ser Tyr Glu Leu Gln Leu Thr Ala Ser 180 185 190

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Asp Ser Pro Asn Asp Glu Asp Thr Gly Asp Thr Ser Thr Ser Ser Leu 965 970 975

Leu Ser Glu Met Ser Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu 980 985 990

Asp Thr Tyr Ser Glu Cys Ser Glu Val Asp Arg Ser Asn Ser Leu Glu
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Arg Arg Lys Gly Pro Leu Pro Ala Lys Thr Val Gly Tyr Pro Gln Gly 1010 1015 1020

Val Ala Ala Trp Ala Ala Ser Thr His Phe Gln Asn Pro Thr Thr Asn 1025 1030 1035 1040

Cys Gly Pro Pro Leu Gly Thr His Ser Ser Val Gln Pro Ser Ser Lys 1045 1050 1055

Trp Leu Pro Ala Met Glu Glu Ile Pro Glu As
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Phe Asp Asn Val Leu Asn His Leu Asn Asp Gly Lys His Glu Leu Met 1075 1080 1085

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Gly	Ser 290	Lys	Ala	Lys	Phe	Ser 295	Pro	Val	Ser	Trp	Ala 300	Ser	Lys	Lys	Leu
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Gly Lys Asp Phe Val Ser Pro Ser Ser Pro Ser Gly Val Gly Asn Val 325 330 335

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Asp Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala 50 55 60

Phe Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp
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Ala Ser Leu Arg Leu Pro Gly Ile Gln Leu Glu Glu Ala Gly Glu Tyr 85 90 95

Arg Cys Glu Val Val Thr Pro Leu Lys Ala Gln Gly Thr Val Gln
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Leu Glu Val Val Ala Ser Pro Ala Ser Arg Leu Leu Leu Asp Gln Val 115 120 125

Gly Met Lys Glu Asn Glu Asp Lys Tyr Met Cys Glu Ser Ser Gly Phe 130 135 140

Pro His Pro Ile Glu Ile Ser Glu Asp Val Ile Thr Gly Pro Thr Ile

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Leu Trp Ala Leu Thr Thr Glu Gly

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<212> PRT

<213> Homo sapiens

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Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe Asp 35 40 45

Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala Phe 50 55 60

Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp Ala 65 70 75 80

Ser Leu Arg Leu Pro Gly Ile Gln Leu Glu Glu Ala Gly Glu Tyr Arg 85 90 95

Cys Glu Val Val Thr Pro Leu Lys Ala Gln Gly Thr Val Gln Leu
100 105 110

Glu Val Val Ala Ser Pro Ala Ser Arg Leu Leu Asp Gln Val Gly
115 120 125

Met Lys Glu Asn Glu Asp Lys Tyr Met Cys Glu Ser Ser Gly Phe Tyr 130 135 140

Pro Glu Ala Ile Asn Ile Thr Trp Glu Lys Gln Thr Gln Lys Phe Pro 145 150 155 160

His Pro Ile Glu Ile Ser Glu Asp Val Ile Thr Gly Pro Thr Ile Lys 165 170 175

Asn Met Asp Gly Thr Phe Asn Val Thr Ser Cys Leu Lys Leu Asn Ser 180 185 190

Ser Gln Glu Asp Pro Gly Thr Val Tyr Gln Cys Val Val Arg His Ala 195 200 205

Ser Leu His Thr Pro Leu Arg Ser Asn Phe Thr Leu Thr Ala Ala Arg 210 215 220 His Ser Leu Ser Glu Thr Glu Lys Thr Asp Asn Phe Ser Ile His 225 230 235

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<211> 84

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Asp Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala 35 40 45

Phe Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp 50 55 60

Ala Ser Leu Arg Leu Pro Gly Ile Gln Leu Glu Glu Ala Gly Glu Tyr 65 70 75 80

Arg Cys Glu Val

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Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu Met Ile Gly Thr Gly Thr Val Thr Arg Lys Gly Ser Thr Phe Arg Pro Met Asp Thr Asp Ala Glu Glu Ala Gly Val Ser Thr Asp Ala Gly Gly His Tyr Asp Cys Pro Gln Arg Ala Gly Arg His Glu Tyr Ala Leu Pro Leu Ala Pro Pro Glu Pro Glu Tyr Ala Thr Pro Ile Val Glu Arg His Val Leu Arg Ala His Thr Phe Ser Ala Gln Ser Gly Tyr Arg Val Pro Gly Pro Gln Pro Gly His Lys His Ser Leu Ser Ser Gly Gly Phe Ser Pro Val Ala Gly Val Gly Ala Gln Asp Gly Asp Tyr Gln Arg Pro His Ser Ala Gln Pro Ala Asp Arg Gly Tyr Asp Arg Pro Lys Ala Val Ser Ala Leu Ala Thr Glu Ser Gly His Pro Asp Ser Gln Lys Pro Pro Thr His Pro Gly Thr Ser Asp Ser Tyr Ser Ala Pro Arg Asp Cys Leu Thr Pro Leu Asn Gln Thr Ala Met Thr Ala Leu Leu <210> 74 <211> 34 <212> PRT <213> Homo sapiens

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Lys	Ile 290	Thr	Gly	Ile	Arg	Thr 295	Thr	Gly	Ser	Thr	Gln 300	Ser	Asn	Phe	Asn
Phe 305	Tyr	Val	Lys	Ser	Phe 310	Val	Met	Asn	Phe	Lys 315	Asn	Asn	Asn	Ser	Lys 320
Trp	Lys	Thr	Tyr	Lys 325	Gly	Ile	Val	Asn	Asn 330	Glu	Glu	Lys	Val	Phe 335	Gln
Gly	Asn	Ser	Asn 340	Phe	Arg	Asp	Pro	Val 345	Gln	Asn	Asn	Phe	Ile 350	Pro	Pro
Ile	Val	Ala 355	Arg	Tyr	Val	Arg	Val 360	Val	Pro	Gln	Thr	Trp 365	His	Gln	Arg
Ile	Ala 370	Leu	Lys	Val	Glu	Leu 375	Ile	Gly	Cys	Gln	Ile 380	Thr	Gln	Gly	Asn
Asp 385	Ser	Leu	Val	Trp	Arg 390	Lys	Thr	Ser	Gln	Ser 395	Thr	Ser	Val	Ser	Thr 400
Lys	Lys	Glu	Asp	Glu 405	Thr	Ile	Thr	Arg	Pro 410	Ile	Pro	Ser	Glu	Glu 415	Thr
Ser	Thr	Gly	Ile 420	Asn	Ile	Thr	Thr	Val 425	Ala	Ile	Pro	Leu	Val 430	Leu	Leu
Val	Val	Leu 435	Val	Phe	Ala	Gly	Met 440	Gly	Ile	Phe	Ala	Ala 445	Phe	Arg	Lys
Lys	Lys	Lys	Lys	Gly	Ser	Pro	Tyr	Gly	Ser	Ala	Glu	Ala	Gln	Lys	Thr

450 455 460

Asp Cys Trp Lys Gln Ile Lys Tyr Pro Phe Ala Arg His Gln Ser Ala Glu Phe Thr Ile Ser Tyr Asp Asn Glu Lys Glu Met Thr Gln Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu Met Ile Gly Thr Gly Thr Val Thr Arg Lys Gly Ser Thr Phe Arg Pro Met Asp Thr Asp Ala Glu Glu Ala Gly Val Ser Thr Asp Ala Gly Gly His Tyr Asp Cys Pro Gln Arg Ala Gly Arg His Glu Tyr Ala Leu Pro Leu Ala Pro Pro Glu Pro Glu Tyr Ala Thr Pro Ile Val Glu Arg His Val Leu Arg Ala His Thr Phe Ser Ala Gln Ser Gly Tyr Arg Val Pro Gly Pro Gln Pro Gly His Lys His Ser Leu Ser Ser Gly Gly Phe Ser Pro Val Ala Gly Val Gly Ala Gln Asp Gly Asp Tyr Gln Arg Pro His Ser Ala Gln Pro Ala Asp Arg Gly Tyr Asp Arg Pro Lys Ala Val Ser Ala Leu Ala Thr Glu Ser Gly His Pro Asp Ser Gln Lys Pro Pro Thr His Pro

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Ser Val Asn Glu Ser Gly Asp Gln Val His Trp Ser Pro Gly Gln Ala Arg Leu Gln Asp Gln Gly Pro Ser Trp Ala Ser Gly Asp Ser Ser Asn Asn His Lys Pro Arg Glu Trp Leu Glu Ile Asp Leu Gly Glu Lys Lys Lys Ile Thr Gly Ile Arg Thr Thr Gly Ser Thr Gln Ser Asn Phe Asn Phe Tyr Val Lys Ser Phe Val Met Asn Phe Lys Asn Asn Ser Lys Trp Lys Thr Tyr Lys Gly Ile Val Asn Asn Glu Glu Lys Val Phe Gln Gly Asn Ser Asn Phe Arg Asp Pro Val Gln Asn Asn Phe Ile Pro Pro Ile Val Ala Arg Tyr Val Arg Val Val Pro Gln Thr Trp His Gln Arg Ile Ala Leu Lys Val Glu Leu Ile Gly Cys Gln Ile Thr Gln Gly Asn Asp Ser Leu Val Trp Arg Lys Thr Ser Gln Ser Thr Ser Val Ser Thr Lys Lys Glu Asp Glu Thr Ile Thr Arg Pro Ile Pro Ser Glu Glu Thr Ser Thr Gly Ile Asn <210> 77 <211> 25 <212> PRT <213> Homo sapiens <400> 77 Ile Thr Thr Val Ala Ile Pro Leu Val Leu Leu Val Val Leu Val Phe

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Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu 50 55 60

Met Ile Gly Thr Gly Thr Val Thr Arg Lys Gly Ser Thr Phe Arg Pro 65 70 75 80

Met Asp Thr Asp Ala Glu Glu Ala Gly Val Ser Thr Asp Ala Gly Gly 85 90 95

His Tyr Asp Cys Pro Gln Arg Ala Gly Arg His Glu Tyr Ala Leu Pro 100 105 110

Leu Ala Pro Pro Glu Pro Glu Tyr Ala Thr Pro Ile Val Glu Arg His 115 120 125

Val Leu Arg Ala His Thr Phe Ser Ala Gln Ser Gly Tyr Arg Val Pro 130 135 140

Gly Pro Gln Pro Gly His Lys His Ser Leu Ser Ser Gly Gly Phe Ser 145 150 155 160

Pro Val Ala Gly Val Gly Ala Gln Asp Gly Asp Tyr Gln Arg Pro His 165 170 175

Ser Ala Gln Pro Ala Asp Arg Gly Tyr Asp Arg Pro Lys Ala Val Ser 180 185 190

Ala Leu Ala Thr Glu Ser Gly His Pro Asp Ser Gln Lys Pro Pro Thr 195 200 205

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Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Ser 35 40 45

Gln Ile Phe Gly Ser Ser Ser Pro Ser Pro Asn Gly Phe Ile Thr Thr 50 55 60

Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp Glu Phe Tyr Gln Ala 65 70 75 80

Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg 85 90 95

Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro 100 105 110

Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe 115 120 125

Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn
130
135
140

Asn Ser Val Phe Asn Gly Asn Val Thr Asn Gln Asn Gln Asn Phe Asn 145 150 155 160

Cys Ala Thr Ile Gly Leu Thr Lys Thr Phe Asp Ala Ala Ser Cys Asp 165 170 175

Ile Ser Tyr Arg Arg Ile Cys Glu Lys Asn Ala Lys 180 185

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Leu Leu Tyr

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Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser 50 55 60

Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn Val Thr Asn Gln Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr Lys Thr Phe Asp Ala Ala Ser Cys Asp Ile Ser Tyr Arg Arg Ile Cys Glu Lys Asn Ala Lys <210> 86 <211> 187 <212> PRT <213> Homo sapiens <400> 86 Met Asn Trp His Met Ile Ile Ser Gly Leu Ile Val Val Leu Lys Val Val Gly Met Thr Leu Phe Leu Leu Tyr Phe Pro Gln Ile Phe Asn Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Ser Gln Ile Phe Gly Ser Ser Pro Ser Pro Asn Gly Phe Ile Thr Thr Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro

Glu Lys Leu Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile 115 120 125

Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn 130 135 140

Ser Val Phe Asn Gly Asn Val Thr Asn Gln Asn Gln Asn Phe Asn Cys 145 150 155 160

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Val Gln Asn Val Ser Gln Ile Phe Gly Arg Asn Asp Glu Ser Thr Met 50 55 60

Pro Thr Arg Ser Tyr Gly Thr Val Cys Pro Arg Asn Trp Asp Phe His 65 70 75 80

Gln Gly Lys Cys Phe Phe Phe Ser Phe Ser Glu Ser Pro Trp Lys Asp 85 90 95

Ser Met Asp Tyr Cys Ala Thr Gln Gly Ser Thr Leu Ala Ile Val Asn 100 105 110

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Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp 65 70 75 80

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Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu Tyr Leu Gly Trp Thr 145 150 155 Thr Ala Leu Val Leu Ile Val Gly Gly Ala Leu Phe Cys Cys Val Phe 165 170 175 Cys Cys Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His 180 185 190 Arg Thr Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val 195 200 205 Tyr Ser Arg Ser Gln Tyr Val 210 215 <210> 124 <211> 24 <212> PRT <213> Homo sapiens <400> 124 Leu Phe Leu Gly Gly Val Gly Met Val Gly Thr Val Ala Val Thr Val 5 10 Met Pro Gln Trp Arg Val Ser Ala 20 <210> 125 <211> 47 <212> PRT <213> Homo sapiens <400> 125 Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn Phe Trp Glu Gly Leu 5 Trp Met Asn Cys Val Arg Gln Ala Asn Ile Arg Met Gln Cys Lys Ile 25 Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ala Arg 35 40

92

<210> 126 <211> 21 <212> PRT

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<213> Homo sapiens
<400> 126
Gly Leu Met Cys Ala Ala Ser Val Met Ser Phe Leu Ala Phe Met Met
                                      10
                                                          15
Ala Ile Leu Gly Met
             20
<210> 127
<211> 15
<212> PRT
<213> Homo sapiens
<400> 127
Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His
                                      10
<210> 128
<211> 24
<212> PRT
<213> Homo sapiens
<400> 128
Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val
                  5
                                      10
Leu Ile Pro Val Ser Trp Val Ala
             20
<210> 129
<211> 22
<212> PRT
<213> Homo sapiens
<400> 129
Asn Ala Ile Ile Arg Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln
                  5
                                      10
Lys Arg Glu Leu Gly Glu
             20
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<210> 130 <211> 25 <212> PRT

<213> Homo sapiens

<400> 130

Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly
1 5 10 15

Ala Leu Phe Cys Cys Val Phe Cys Cys
20 25

<210> 131

<211> 37

<212> PRT

<213> Homo sapiens

<400> 131

Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr
1 5 10 15

Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser 20 25 30

Arg Ser Gln Tyr Val
35

<210> 132

<211> 225

<212> PRT

<213> Mus sp.

<400> 132

Met Ala Thr Tyr Ala Leu Gln Met Ala Ala Leu Val Leu Gly Gly Val 1 5 10 15

Gly Met Val Gly Thr Val Ala Val Thr Ile Met Pro Gln Trp Arg Val $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Ser Ala Phe Ile Glu Ser Asn Ile Val Val Phe Glu Asn Arg Trp Glu 35 40 45

Gly Leu Trp Met Asn Cys Met Arg His Ala Asn Ile Arg Met Gln Cys 50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ser
65 70 75 80

Arg Gly Leu Met Cys Ala Ala Ser Val Leu Ala Phe Leu Ala Phe Met Thr Ala Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asp Glu Asn Val Lys Ser Arg Ile Leu Leu Thr Ala Gly Ile Ile Phe Phe Ile Thr Gly Leu Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ser Ile Ile Arg Asp Phe Tyr Asn Pro Leu Val Asp Val Ala Leu Lys Arg Glu Leu Gly Glu Ala Leu Tyr Ile Gly Trp Thr Thr Ala Leu Val Leu Ile Ala Gly Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Thr Glu Arg Ser Asn Ser Tyr Arg Tyr Ser Val Pro Ser His Arg Thr Thr Gln Arg Ser Phe His Ala Glu Lys Arg Ser Pro Ser Ile Tyr Ser Lys Ser Gln Tyr Val <210> 133 <211> 678 <212> PRT <213> Mus sp. <400> 133 Ala Thr Gly Gly Cys Ala Ala Cys Cys Thr Ala Cys Gly Cys Thr Cys Thr Thr Cys Ala Ala Ala Thr Gly Gly Cys Thr Gly Cys Ala Cys Thr Gly Gly Thr Gly Cys Thr Thr Gly Gly Thr Gly Gly Thr Gly Thr Thr

Gly Gly Cys Ala Thr Gly Gly Thr Gly Gly Gly Cys Ala Cys Gly Gly

Thr 65	Gly	Gly	Cys	Thr	Gly 70	Thr	Gly	Ala	Cys	Thr 75	Ala	Thr	Cys	Ala	Thr 80
Gly	Cys	Cys	Thr	Cys 85	Ala	Gly	Thr	Gly	Gly 90	Ala	Gly	Ala	Gly	Thr 95	Gly
Thr	Cys	Thr	Gly 100	Cys	Cys	Thr	Thr	Cys 105	Ala	Thr	Cys	Gly	Ala 110	Ala	Ala
Gly	Thr	Ala 115	Ala	Cys	Ala	Thr	Thr 120	Gly	Thr	Gly	Gly	Thr 125	Gly	Thr	Thr
Thr	Gly 130	Ala	Gly	Ala	Ala	Cys 135	Cys	Gly	Cys	Thr	Gly 140	Gly	Gly	Ala	Ala
Gly 145	Gly	Cys	Thr	Thr	Gly 150	Thr	Gly	Gly	Ala	Thr 155	Gly	Ala	Ala	Thr	Thr 160
Gly	Thr	Ala	Thr	Gly 165	Ala	Gly	Gly	Cys	Ala 170	Thr	Gly	Cys	Cys	Ala 175	Ala
Cys	Ala	Thr	Cys 180	Ala	Gly	Ala	Ala	Thr 185	Gly	Cys	Ala	Gly	Thr 190	Gly	Cys
Ala	Ala	Gly 195	Gly	Thr	Cys	Thr	Ala 200	Cys	Gly	Ala	Cys	Thr 205	Cys	Cys	Cys
Thr	Gly 210	Cys	Thr	Gly	Gly	Cys 215	Thr	Cys	Thr	Thr	Ala 220	Gly	Thr	Cys	Cys
Ala 225	Gly	Ala	Cys	Cys	Thr 230	Cys	Cys	Ala	Gly	Gly 235	Cys	Ala	Thr	Cys	Cys 240
Cys	Gly	Ala	Gly	Gly 245	Ala	Cys	Thr	Gly	Ala 250	Thr	Gly	Thr	Gly	Thr 255	Gly
Cys	Thr	Gly	Cys 260	Gly	Thr	Cys	Cys	Gly 265	Thr	Cys	Thr	Thr	Gly 270	Gly	Cys
Thr	Thr	Thr 275	Cys	Thr	Thr	Gly	Gly 280	Cys	Thr	Thr	Thr	Cys 285	Ala	Thr	Gly
Ala	Cys 290	Ala	Gly	Cys	Cys	Ala 295	Thr	Cys	Cys	Thr	Cys 300	Gly	Gly	Ala	Ala
Thr 305	Gly	Ala	Ala	Gly	Thr 310	Gly	Cys	Ala	Cys	Cys 315	Ala	Gly	Ala	Thr	Gly 320

Cys	Ala	Cys	Gly	Gly 325	Gly	Gly	Gly	Ala	Cys 330	Gly	Ala	Thr	Gly	Ala 335	Gly
Ala	Ala	Cys	Gly 340	Thr	Gly	Ala	Ala	Gly 345	Ala	Gly	Cys	Cys	Gly 350	Cys	Ala
Thr	Cys	Thr 355	Thr	Gly	Cys	Thr	Gly 360	Ala	Cys	Ala	Gly	Cys 365	Cys	Gly	Gly
Ala	Ala 370	Thr	Cys	Ala	Thr	Cys 375	Thr	Thr	Cys	Thr	Thr 380	Cys	Ala	Thr	Cys
Ala 385	Cys	Cys	Gly	Gly	Cys 390	Thr	Thr	Gly	Gly	Thr 395	Thr	Gly	Thr	Gly	Cys 400
Thr	Cys	Ala	Thr	Cys 405	Cys	Cys	Thr	Gly	Thr 410	Cys	Ala	Gly	Cys	Thr 415	Gly
Gly	Gly	Thr	Thr 420	Gly	Cys	Cys	Ala	Ala 425	Thr	Thr	Cys	Cys	Ala 430	Thr	Cys
Ala	Thr	Cys 435	Ala	Gly	Ala	Gly	Ala 440	Cys	Thr	Thr	Cys	Thr 445	Ala	Cys	Ala
Ala	Cys 450	Cys	Cys	Ala	Cys	Thr 455	Gly	Gly	Thr	Gly	Gly 460	Ala	Thr	Gly	Thr
Gly 465	Gly	Cys	Cys	Cys	Thr 470	Ala	Ala	Ala	Gly	Cys 475	Gly	Cys	Gly	Ala	Gly 480
Cys	Thr	Gly	Gly	Gly 485	Ala	Gly	Ala	Ala	Gly 490	Cys	Cys	Cys	Thr	Cys 495	Thr
Ala	Cys	Ala	Thr 500	Ala	Gly	Gly	Cys	Thr 505	Gly	Gly	Ala	Cys	Cys 510	Ala	Cys
Ala	Gly	Cys 515	Gly	Cys	Thr	Gly	Gly 520	Thr	Gly	Cys	Thr	Gly 525	Ala	Thr	Cys
Gly	Cys 530	Thr	Gly	Gly	Ala	Gly 535	Gly	Ala	Gly	Cys	Ala 540	Cys	Thr	Gly	Thr
Thr 545	Cys	Thr	Gly	Thr	Thr 550	Gly	Thr	Gly	Thr	Gly 555	Thr	Thr	Thr	Thr	Gly 560
Thr	Thr	Gly	Thr	Ala 565	Cys	Thr	Gly	Ala	Ala 570	Ala	Gly	Gly	Ala	Gly 575	Суѕ

Ala Ala Cys Ala Gly Thr Thr Ala Cys Ala Gly Gly Thr Ala Cys Thr 580 585 590

Cys Gly Gly Thr Ala Cys Cys Ala Thr Cys Cys Cys Ala Thr Cys Gly 595 600 605

Cys Ala Cys Cys Ala Cys Thr Cys Ala Ala Cys Gly Gly Ala Gly Thr 610 620

Thr Thr Cys Cys Ala Cys Gly Cys Cys Gly Ala Ala Ala Ala Gly Ala 625 635 640

Gly Ala Thr Cys Thr Cys Cys Gly Ala Gly Cys Ala Thr Ala Thr Ala 645 650 655

Cys Thr Cys Cys Ala Ala Ala Ala Gly Thr Cys Ala Gly Thr Ala Thr 660 665 670

Gly Thr Gly Thr Ala Gly 675

<210> 134

<211> 1090

<212> PRT

<213> Homo sapiens

<400> 134

Gly Gly Gly Cys Ala Gly Ala Ala Thr Gly Ala Gly Ala Thr Ala
1 5 10 15

Thr Thr Ala Ala Cys Cys Cys Ala Ala Thr Gly Cys Thr Thr Thr 20 25 30

Gly Ala Thr Thr Gly Thr Thr Cys Thr Ala Gly Ala Ala Ala Gly Thr
35 40 45

Ala Thr Ala Gly Thr Ala Ala Thr Thr Thr Gly Thr Thr Thr Cys
50 55 60

Thr Ala Ala Gly Gly Thr Gly Gly Thr Thr Cys Ala Ala Gly Cys Ala
65 70 75 80

Thr Cys Thr Ala Cys Thr Cys Thr Thr Thr Thr Ala Thr Cys Ala 85 90 95

Thr Thr Ala Cys Thr Thr Cys Ala Ala Ala Thr Gly Ala Cys

	100		105			110	
Ala Thr Thr	Gly Cys T		Ala Ala 120	Gly Ala	Cys Thr 125	Gly Cys	Ala
Thr Thr Ala	Thr Thr T	hr Thr <i>I</i>	Ala Cys	Thr Ala	Cys Thr 140	Gly Thr	Ala
Ala Thr Thr 145		hr Cys (Cys Ala	Cys Gly 155	Ala Cys	Ala Thr	Ala 160
Gly Cys Ala	Thr Thr A	la Thr (Gly Thr	Ala Cys 170	Ala Thr	Ala Gly 175	Ala
Thr Gly Ala	Gly Thr G 180	ly Thr A	Ala Ala 185	Cys Ala	Thr Thr	Thr Ala	Thr
Ala Thr Cys 195	Thr Cys A	-	Ala Thr 200	Ala Gly	Ala Gly 205	Ala Cys	Ala
Thr Gly Cys	Thr Thr A	la Thr <i>F</i> 215	Ala Thr	Gly Gly	Thr Thr 220	Thr Thr	Ala
Thr Thr Thr . 225		la Ala T 30	Thr Gly	Ala Ala 235	Ala Thr	Gly Cys	Cys 240
Ala Gly Thr	Cys Cys A 245	la Thr 1	Thr Ala	Cys Ala 250	Cys Thr	Gly Ala 255	Ala
Thr Ala Ala	Ala Thr A 260	la Gly <i>F</i>	Ala Ala 265	Cys Thr	Cys Ala	Ala Cys 270	Thr
Ala Thr Thr	Gly Cys T		Thr Thr 280	Cys Ala	Gly Gly 285	Gly Ala	Ala
Ala Thr Cys 2	Ala Thr G	ly Gly <i>F</i> 295	Ala Thr	Ala Gly	Gly Gly 300	Thr Thr	Gly
Ala Ala Gly 2 305		ly Gly 1	Thr Thr	Ala Cys 315	Thr Ala	Thr Thr	Ala 320
Ala Thr Thr	Gly Thr T 325	hr Thr 1	Thr Ala	Ala Ala 330	Ala Ala	Cys Ala 335	Gly
Cys Thr Thr	Ala Gly G 340	ly Gly F	Ala Thr 345	Thr Ala	Ala Thr	Gly Thr 350	Cys
Cys Thr Cys	Cys Ala T	hr Thr I	Thr Ala	Thr Ala	Ala Thr	Gly Ala	Ala

Gly Ala Thr T	hr Ala Ala Ala	Ala Thr Gly Ala	Ala Gly Gly Cys
272	225		

Thr

Thr Thr Ala Ala Thr Cys Ala Gly Cys Ala Thr Thr Gly Thr Ala Ala

Ala Gly Gly Ala Ala Thr Thr Gly Ala Ala Thr Gly Gly Cys Thr

Thr Thr Cys Thr Gly Ala Thr Ala Thr Gly Cys Thr Gly Thr Thr

Thr Thr Ala Gly Cys Cys Thr Ala Gly Gly Ala Gly Thr Thr Ala

Gly Ala Ala Ala Thr Cys Cys Thr Ala Ala Cys Thr Thr Cys Thr Thr

Thr Ala Thr Cys Cys Thr Cys Thr Thr Cys Thr Cys Cys Cys Ala Gly

Ala Gly Gly Cys Thr Thr Thr Thr Thr Thr Thr Thr Thr Cys Thr Thr

Gly Thr Gly Thr Ala Thr Thr Ala Ala Ala Thr Thr Ala Ala Cys Ala

Thr Thr Thr Thr Ala Ala Ala Ala Gly Cys Ala Gly Ala Thr

Ala Thr Thr Thr Gly Thr Cys Ala Ala Gly Gly Gly Cys Thr

Thr Thr Gly Cys Ala Thr Thr Cys Ala Ala Ala Cys Thr Gly Cys Thr

Thr Thr Cys Cys Ala Gly Gly Cys Thr Ala Thr Ala Cys Thr

Cys Ala Gly Ala Ala Gly Ala Ala Gly Ala Thr Ala Ala Ala

Gly Thr Gly Thr Gly Ala Thr Cys Thr Ala Ala Gly Ala Ala Ala

Ala Gly Thr Gly Ala Thr Gly Gly Thr Thr Thr Ala Gly Gly Ala

Ala	Ala	Gly	Thr	Gly	Ala	Ala	Ala	Ala	Thr	Ala	Thr	Thr	Thr	Thr	Thr
625					630					635					640

- Gly Thr Thr Thr Thr, Gly Thr Ala Thr Thr Gly Ala Ala Gly
- Ala Ala Gly Ala Ala Thr Gly Ala Thr Gly Cys Ala Thr Thr Thr
- Gly Ala Cys Ala Ala Gly Ala Ala Ala Thr Cys Ala Thr Ala Thr Ala
- Thr Gly Thr Ala Thr Gly Gly Ala Thr Ala Thr Ala Thr Thr Thr
- Ala Ala Thr Ala Ala Gly Thr Ala Thr Thr Gly Ala Gly Thr Ala
- Cys Ala Gly Ala Cys Thr Thr Thr Gly Ala Gly Gly Thr Thr Thr Cys
- Ala Thr Cys Ala Ala Thr Ala Thr Ala Ala Thr Ala Ala Ala Ala
- Gly Ala Gly Cys Ala Gly Ala Ala Ala Ala Ala Thr Ala Thr Gly Thr
- Cys Thr Thr Gly Gly Thr Thr Thr Thr Cys Ala Thr Thr Thr Gly Cys
- Thr Thr Ala Cys Cys Ala Ala Ala Ala Ala Ala Cys Ala Ala Cys
- Ala Ala Cys Ala Ala Ala Ala Ala Ala Gly Thr Thr Gly Thr Cys
- Cys Thr Thr Gly Ala Gly Ala Cys Thr Thr Cys Ala Cys Cys
- Thr Gly Cys Thr Cys Cys Thr Ala Thr Gly Thr Gly Gly Gly Thr Ala
- Cys Cys Thr Gly Ala Gly Thr Cys Ala Ala Ala Thr Thr Gly Thr
- Cys Ala Thr Thr Thr Thr Gly Thr Thr Cys Thr Gly Thr Gly Ala

Ala Ala Ala Ala Thr Ala Ala Ala Thr Thr Cys Cys Thr Thr Cys 885 890 895

Thr Thr Gly Thr Ala Cys Cys Ala Thr Thr Thr Cys Thr Gly Thr Thr 900 905 910

Thr Ala Gly Thr Thr Thr Thr Ala Cys Thr Ala Ala Ala Ala Thr Cys 915 920 925

Thr Gly Thr Ala Ala Ala Thr Ala Cys Thr Gly Thr Ala Thr Thr 930 935 940

Thr Thr Cys Thr Gly Thr Thr Thr Ala Thr Thr Cys Cys Ala Ala Ala 945 950 955 960

Thr Thr Gly Ala Thr Gly Ala Ala Cys Thr Gly Ala Cys Ala 965 970 975

Ala Thr Cys Cys Ala Ala Thr Thr Gly Ala Ala Gly Thr Thr 980 985 990

Thr Gly Thr Gly Thr Cys Gly Ala Cys Gly Thr Cys Thr Gly Thr Cys 995 1000 1005

Thr Ala Gly Cys Thr Thr Ala Ala Ala Thr Gly Ala Ala Thr Gly Thr 1010 1015 1020

Gly Thr Thr Cys Thr Ala Thr Thr Gly Cys Thr Thr Thr Ala Thr 1025 1030 1035 1040

Ala Cys Ala Thr Thr Ala Thr Ala Thr Thr Ala Ala Thr Ala Ala 1045 1050 1055

Ala Thr Thr Gly Thr Ala Cys Ala Thr Thr Thr Thr Thr Cys Cys Ala 1060 1065 1070

Ala Ala 1090

<210> 135

<211> 209

<212> PRT

<213> Homo sapiens

<400> 135

Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu 1 5 10 15

Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val 20 25 30

Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu
35 40 45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala 65 70 75 80

Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu 85 90 95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser 100 105 110

Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala 115 120 125

Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile 130 135 140

Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met 145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu 165 170 175

Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro 180 185 190

Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr 195 200 205

Val

<210> 136

<211> 210

<212> PRT <213> Mus sp.

<400> 136

Met Ala Ser Met Gly Leu Gln Val Leu Gly Ile Ser Leu Ala Val Leu 1 5 10 15

Gly Trp Leu Gly Ile Ile Leu Ser Cys Ala Leu Pro Met Trp Arg Val 20 25 30

Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ala Gln Thr Ser Trp Glu 35 40 45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
50 55 60

Lys Met Tyr Asp Ser Met Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala 65 70 75 80

Arg Ala Leu Met Val Ile Ser Ile Ile Val Gly Ala Leu Gly Met Leu 85 90 95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Met Glu Asp Glu Thr 100 105 110

Val Lys Ala Lys Ile Met Ile Thr Ala Gly Ala Val Phe Ile Val Ala 115 120 125

Ser Met Leu Ile Met Val Pro Val Ser Trp Thr Ala His Asn Val Ile 130 135 140

Arg Asp Phe Tyr Asn Pro Met Val Ala Ser Gly Gln Lys Arg Glu Met 145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu 165 170 175

Gly Gly Leu Leu Cys Cys Ser Cys Pro Pro Arg Ser Asn Asp Lys 180 185 190

Pro Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Val Pro Ala Ser Asn 195 200 205

Tyr Val 210

<210> 137

<211> 248

<212> PRT

<213> Rattus sp.

<400> 137

Met Ser Met Ser Leu Glu Ile Thr Gly Thr Ser Leu Ala Val Leu Gly $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Trp Leu Cys Thr Ile Val Cys Cys Ala Leu Pro Met Trp Arg Val Ser 20 25 30

Ala Phe Ile Gly Ser Ser Ile Ile Thr Ala Gln Ile Thr Trp Glu Gly
35 40 45

Leu Trp Met Asn Cys Val Gln Ser Thr Gly Gln Met Gln Cys Lys Met 50 55 60

Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Arg Ala 65 70 75 80

Leu Ile Val Val Ser Ile Leu Leu Ala Ala Phe Gly Leu Leu Val Ala 85 90 95

Leu Val Gly Ala Gln Cys Thr Asn Cys Val Gln Asp Glu Thr Ala Lys
100 105 110

Ala Lys Ile Thr Ile Val Ala Gly Val Leu Phe Leu Leu Ala Ala Val 115 120 125

Leu Thr Leu Val Pro Val Ser Trp Ser Ala Asn Thr Ile Ile Arg Asp 130 135 140

Phe Tyr Asn Pro Leu Val Pro Glu Ala Gln Lys Arg Glu Met Gly Thr 145 150 155 160

Gly Leu Tyr Val Gly Trp Ala Ala Ala Leu Gln Leu Leu Gly Gly
165 170 175

Ala Leu Leu Cys Cys Ser Cys Pro Pro Arg Glu Lys Tyr Ala Pro Thr 180 185 190

Lys Ile Leu Tyr Ser Ala Pro Arg Ser Thr Gly Pro Gly Thr Gly Thr 195 200 205

Gly Thr Ala Tyr Asp Arg Lys Thr Thr Ser Glu Arg Pro Gly Ala Arg 210 215 220

Thr Pro His His His Tyr Gln Pro Ser Met Tyr Pro Thr Arg Pro

225 230 235 240

Ala Cys Ser Leu Ala Ser Glu Thr 245

<210> 138

<211> 191

<212> PRT

<213> Homo sapiens

<400> 138

Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn Phe Trp Glu Gly Leu
1 5 10 15

Trp Met Asn Cys Val Arg Gln Ala Asn Ile Arg Met Gln Cys Lys Ile 20 25 30

Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ala Arg Gly
35 40 45

Leu Met Cys Ala Ala Ser Val Met Ser Phe Leu Ala Phe Met Met Ala 50 55 60

Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val 65 70 75 80

Lys Ala His Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly 85 90 95

Met Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg 100 105 110

Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly 115 120 125

Glu Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly
130 135 140

Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser 145 150 155 160

Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His
165 170 175

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val 180 185 190

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<210> 139
<400> 139
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<210> 140
<400> 140
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<210> 141
<211> 323
<212> DNA
<213> Homo sapiens
<400> 141
cgagcggccg cccgggcagg tcagacatgg gccaaggagc cagaggccgt ccggggtctg 60
tgagttgagc ttgaggccgc aggatgaggg tcatcatggg gatagccagc ctggggttcc 120
tctgggcagt attcctgctt cctcttgtgt ttggggtccc cacagaggag actacctttg 180
gagaatetqt qqcctcccat ctccccaaaq qctqtcqacq atqctqtqac cccqaqqacc 240
tgatgtcctc tgatgatacg gtccaggccc ctgtttcccc ttatgtcctg cctgaagtca 300
ggccgtacct cggccgcgac cac
                                                                   323
<210> 142
<211> 240
<212> DNA
<213> Homo sapiens
<400> 142
atgagggtca tcatggggat agccagcctg gggttcctct gggcagtatt cctgcttcct 60
cttgtgtttg gggtccccac agaggagact acctttggag aatctgtggc ctcccatctc 120
cccaaaggct gtcgacgatg ctgtgacccc gaggacctga tgtcctctga tgatacqqtc 180
caggecectg tttcccctta tgtcctgcct gaagtcaggc cgtacctcqq ccqcqaccac 240
<210> 143
<211> 80
<212> PRT
<213> Homo sapiens
<400> 143
Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val
  1
                  5
                                     10
                                                          15
Phe Leu Leu Pro Leu Val Phe Gly Val Pro Thr Glu Glu Thr Thr Phe
```

30

Gly Glu Ser Val Ala Ser His Leu Pro Lys Gly Cys Arg Arg Cys Cys 35 40 45

Asp Pro Glu Asp Leu Met Ser Ser Asp Asp Thr Val Gln Ala Pro Val 50 55 60

Ser Pro Tyr Val Leu Pro Glu Val Arg Pro Tyr Leu Gly Arg Asp His 65 70 75 80

<210> 144

<211> 24

<212> PRT

<213> Homo sapiens

<400> 144

Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val 1 5 10 15

Phe Leu Leu Pro Leu Val Phe Gly 20

<210> 145

<211> 56

<212> PRT

<213> Homo sapiens

<400> 145

Val Pro Thr Glu Glu Thr Thr Phe Gly Glu Ser Val Ala Ser His Leu
1 5 10 15

Pro Lys Gly Cys Arg Arg Cys Cys Asp Pro Glu Asp Leu Met Ser Ser 20 25 30

Asp Asp Thr Val Gln Ala Pro Val Ser Pro Tyr Val Leu Pro Glu Val 35 40 45

Arg Pro Tyr Leu Gly Arg Asp His 50 55

<210> 146

<400> 146

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<210> 147
<400> 147
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<400> 148
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<210> 149
<400> 149
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<210> 150
<400> 150
000
<210> 151
<211> 546
<212> DNA
<213> Homo sapiens
<400> 151
cggacgcgtg ggcggacgcg tggggttatt tctttggttg ttaggtataa tatgggcatt 60
taaaaacaac acccagtttt gtacttgtat aagtatggaa ttcttatata ggattgttgt 120
tggattcatt cttatcttta cattttttaa tattaaggga cagaatacca agtgtccaat 180
gtcttgttat tatattgtta gggtactggg cactttgggg atattgactg tattctgggt 240
ttgccccctc actattttta atccagacta ttttatacct atcagtataa ctatagttct 300
tactcttctt cttggaattc tttttcttat tgtttattat gggagttttc acccaaacag 360
aagtgcagaa acaaaatgtg atgaaaattga tggaaaacca gttctaagag aatgtagaat 420
gagatatttc ctaatggaat aagctattca tttatgatat atattttctt atattttgtt 480
aaaaaa
                                                             546
<210> 152
<211> 345
<212> DNA
<213> Homo sapiens
<400> 152
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atggaattct tatataggat tgttgttgga ttcattctta tctttacatt ttttaatatt 60

aagggacaga ataccaagtg tccaatgtct tgttattata ttgttagggt actgggcact 120 ttggggatat tgactgtatt ctgggtttgc cccctcacta tttttaatcc agactatttt 180 atacctatca gtataactat agttcttact cttcttcttg gaattctttt tcttattgtt 240 tattatggga gttttcaccc aaacagaagt gcagaaacaa aatgtgatga aattgatgga 300 aaaccagttc taagagaatg tagaatgaga tatttcctaa tggaa <210> 153 <211> 115 <212> PRT <213> Homo sapiens <400> 153 Met Glu Phe Leu Tyr Arg Ile Val Val Gly Phe Ile Leu Ile Phe Thr 10 Phe Phe Asn Ile Lys Gly Gln Asn Thr Lys Cys Pro Met Ser Cys Tyr 20 25 Tyr Ile Val Arg Val Leu Gly Thr Leu Gly Ile Leu Thr Val Phe Trp Val Cys Pro Leu Thr Ile Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser 55 60 Ile Thr Ile Val Leu Thr Leu Leu Gly Ile Leu Phe Leu Ile Val 65 70 75 Tyr Tyr Gly Ser Phe His Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp 85 90 95 Glu Ile Asp Gly Lys Pro Val Leu Arg Glu Cys Arg Met Arg Tyr Phe 100 105 110 Leu Met Glu 115 <210> 154 <211> 22 <212> PRT <213> Homo sapiens <400> 154 Met Glu Phe Leu Tyr Arg Ile Val Val Gly Phe Ile Leu Ile Phe Thr 10 15

345

Phe Phe Asn Ile Lys Gly

20

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<210> 155
<211> 93
<212> PRT
<213> Homo sapiens
<400> 155
Gln Asn Thr Lys Cys Pro Met Ser Cys Tyr Tyr Ile Val Arg Val Leu
                  5
                                      10
Gly Thr Leu Gly Ile Leu Thr Val Phe Trp Val Cys Pro Leu Thr Ile
             20
                                  25
                                                      30
Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser Ile Thr Ile Val Leu Thr
         35
                             40
                                                  45
Leu Leu Gly Ile Leu Phe Leu Ile Val Tyr Tyr Gly Ser Phe His
     50
                         55
                                              60
Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp Glu Ile Asp Gly Lys Pro
 65
                     70
                                          75
Val Leu Arg Glu Cys Arg Met Arg Tyr Phe Leu Met Glu
                 85
<210> 156
<211> 9
<212> PRT
<213> Homo sapiens
<400> 156
Gln Asn Thr Lys Cys Pro Met Ser Cys
<210> 157
<211> 18
<212> PRT
<213> Homo sapiens
<400> 157
Tyr Tyr Ile Val Arg Val Leu Gly Thr Leu Gly Ile Leu Thr Val Phe
                                      10
                                                          15
```

Trp Val

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<210> 158
<211> 9
<212> PRT
<213> Homo sapiens
<400> 158
Cys Pro Leu Thr Ile Phe Asn Pro Asp
<210> 159
<211> 24
<212> PRT
<213> Homo sapiens
<400> 159
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Ala Gln Ala Tyr Leu Asn Gln Phe Tyr Ser Leu Glu Ile Glu Gly Asn 35 40 45

His Leu Val Gln Ser Lys Asn Arg Ser Leu Ile Asp Asp Lys Ile Arg 50 55 60

Glu Met Gln Ala Phe Phe Gly Leu Thr Val Thr Gly Lys Leu Asp Ser 65 70 75 80

Asn Thr Leu Glu Ile Met Lys Thr Pro Arg Cys Gly Val Pro Asp Val 85 90 95

Gly Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr 100 105 110

Tyr Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp 115 120 125

Glu	Ala 130	Ile	Gln	Glu	Gly	Leu 135	Glu	Val	Trp	Ser	Lys 140	Val	Thr	Pro	Leu
Lys 145	Phe	Thr	Lys	Ile	Ser 150	Lys	Gly	Ile	Ala	Asp 155	Ile	Met	Ile	Ala	Phe 160
Arg	Thr	Arg	Val	His 165	Gly	Arg	Cys	Pro	Arg 170	Tyr	Phe	Asp	Gly	Pro 175	Leu
Gly	Val	Leu	Gly 180	His	Ala	Phe	Pro	Pro 185	Gly	Pro	Gly	Leu	Gly 190	Gly	Asp
Thr	His	Phe 195	Asp	Glu	Asp	Glu	Asn 200	Trp	Thr	Lys	Asp	Gly 205	Ala	Gly	Phe
Asn	Leu 210	Phe	Leu	Val	Ala	Ala 215	His	Glu	Phe	Gly	His 220	Ala	Leu	Gly	Leu
Ser 225	His	Ser	Asn	Asp	Gln 230	Thr	Ala	Leu	Met	Phe 235	Pro	Asn	Tyr	Val	Ser 240
Leu	Asp	Pro	Arg	Lys 245	Tyr	Pro	Leu	Ser	Gln 250	Asp	Asp	Ile	Asn	Gly 255	Ile
Gln	Ser	Ile	Tyr 260	Gly	Gly	Leu	Pro	Lys 265	Val	Pro	Ala	Lys	Pro 270	Lys	Glu
Pro	Thr	Ile 275	Pro	His	Ala	Cys	Asp 280	Pro	Asp	Leu	Thr	Phe 285	Asp	Ala	Ile
Thr	Thr 290	Phe	Arg	Arg	Glu	Val 295	Met	Phe	Phe	Lys	Gly 300	Arg	His	Leu	Trp
Arg 305	Ile	Tyr	Tyr	Asp	Ile 310	Thr	Asp	Val	Glu	Phe 315	Glu	Leu	Ile	Ala	Ser 320
Phe	Trp	Pro	Ser	Leu 325	Pro	Ala	Asp	Leu	Gln 330	Ala	Ala	Tyr	Glu	Asn 335	Pro
Arg	Asp	Lys	Ile 340	Leu	Val	Phe	Lys	Asp 345	Glu	Asn	Phe	Trp	Met 350	Ile	Arg
Gly	Tyr	Ala 355	Val	Leu	Pro	Asp	Tyr 360	Pro	Lys	Ser	Ile	His 365	Thr	Leu	Gly
Phe	Pro 370	Gly	Arg	Val	Lys	Lys 375	Ile	Asp	Ala	Ala	Val 380	Суз	Asp	Lys	Thr

Thr Arg Lys Thr Tyr Phe Phe Val Gly Ile Trp Cys Trp Arg Phe Asp 385 390 395 400 Glu Met Thr Gln Thr Met Asp Lys Gly Phe Pro Gln Arg Val Lys 405 410 His Phe Pro Gly Ile Ser Ile Arg Val Asp Ala Ala Phe Gln Tyr Lys 420 425 430 Gly Phe Phe Phe Phe Ser Arg Gly Ser Lys Gln Phe Glu Tyr Asn Ile 440 445 Lys Thr Lys Asn Ile Thr Arg Ile Met Arg Thr Asn Thr Trp Phe Gln 455 460 Cys Lys Glu Pro Lys Asn Ser Ser Phe Gly Phe Asp Ile Asn Lys Glu 470 475 Lys Ala His Ser Gly Gly Ile Lys Ile Leu Tyr His Lys Ser Leu Ser 490 Leu Phe Ile Phe Gly Ile Val His Leu Leu Lys Asn Thr Ser Ile Tyr 505 Gln <210> 174 <211> 17 <212> PRT <213> Homo sapiens <400> 174 Met Lys Arg Leu Leu Leu Phe Leu Phe Phe Ile Thr Phe Ser Ser 1 10 15 Ala <210> 175 <211> 291

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Leu	Val	Gln 35	Ser	Lys	Asn	Arg	Ser 40	Leu	Ile	Asp	Asp	Lys 45	Ile	Arg	Glu
Met	Gln 50	Ala	Phe	Phe	Gly	Leu 55	Thr	Val	Thr	Gly	Lys 60	Leu	Asp	Ser	Asn
Thr 65	Leu	Glu	Ile	Met	Lys 70	Thr	Pro	Arg	Cys	Gly 75	Val	Pro	Asp	Val	Gly 80
Gln	Tyr	Gly	Tyr	Thr 85	Leu	Pro	Gly	Trp	Arg 90	Lys	Tyr	Asn	Leu	Thr 95	Tyr
Arg	Ile	Ile	Asn 100	Tyr	Thr	Pro	Asp	Met 105	Ala	Arg	Ala	Ala	Val 110	Asp	Glu
Ala	Ile	Gln 115	Glu	Gly	Leu	Glu	Val 120	Trp	Ser	Lys	Val	Thr 125	Pro	Leu	Lys
Phe	Thr 130	Lys	Ile	Ser	Lys	Gly 135	Ile	Ala	Asp	Ile	Met 140	Ile	Ala	Phe	Arg
Thr 145	Arg	Val	His	Gly	Arg 150	Cys	Pro	Arg	Tyr	Phe 155	Asp	Gly	Pro	Leu	Gly 160
Val	Leu	Gly	His	Ala 165	Phe	Pro	Pro	Gly	Pro 170	Gly	Leu	Gly	Gly	Asp 175	Thr
His	Phe	Asp	Glu 180	Asp	Glu	Asn	Trp	Thr 185	Lys	Asp	Gly	Ala	Gly 190	Phe	Asn
Leu	Phe	Leu 195	Val	Ala	Ala	His	Glu 200	Phe	Gly	His	Ala	Leu 205	Gly	Leu	Ser
His	Ser 210	Asn	Asp	Gln	Thr	Ala 215	Leu	Met	Phe	Pro	Asn 220	Tyr	Val	Ser	Leu
Asp 225	Pro	Arg	Lys	Tyr	Pro 230	Leu	Ser	Gln	Asp	Asp 235	Ile	Asn	Gly	Ile	Gln 240
Ser	Ile	Tyr	Gly	Gly 245	Leu	Pro	Lys	Val	Pro 250	Ala	Lys	Pro	Lys	Glu 255	Pro

Thr Ile Pro His Ala Cys Asp Pro Asp Leu Thr Phe Asp Ala Ile Thr 260 265 270

Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu Trp Arg 275 280 285

Ile Tyr Tyr 290

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Ile Ser Lys Ala Phe Pro Val Ser Ser Lys Glu Lys Asn Thr Lys Thr
20 25 30

Val Gln Asp Tyr Leu Glu Lys Phe Tyr Gln Leu Pro Ser Asn Gln Tyr
35 40 45

Gln Ser Thr Arg Lys Asn Gly Thr Asn Val Ile Val Glu Lys Leu Lys
50 55 60

Glu Met Gln Arg Phe Phe Gly Leu Asn Val Thr Gly Lys Pro Asn Glu 65 70 75 80

Glu Thr Leu Asp Met Met Lys Lys Pro Arg Cys Gly Val Pro Asp Ser 85 90 95

Gly Gly Phe Met Leu Thr Pro Gly Asn Pro Lys Trp Glu Arg Thr Asn 100 105 110

Leu Thr Tyr Arg Ile Arg Asn Tyr Thr Pro Gln Leu Ser Glu Ala Glu 115 120 125

Val Glu Arg Ala Ile Lys Asp Ala Phe Glu Leu Trp Ser Val Ala Ser 130 135 140

Pro Leu Ile Phe Thr Arg Ile Ser Gln Gly Glu Ala Asp Ile Asn Ile 145 150 155 160

Ala Phe Tyr Gln Arg Asp His Gly Asp Asn Ser Pro Phe Asp Gly Pro 165 170 175

Asn Gly Ile Leu Ala His Ala Phe Gln Pro Gly Gln Gly Ile Gly Gly Asp Ala His Phe Asp Ala Glu Glu Thr Trp Thr Asn Thr Ser Ala Asn Tyr Asn Leu Phe Leu Val Ala Ala His Glu Phe Gly His Ser Leu Gly Leu Ala His Ser Ser Asp Pro Gly Ala Leu Met Tyr Pro Asn Tyr Ala Phe Arg Glu Thr Ser Asn Tyr Ser Leu Pro Gln Asp Asp Ile Asp Gly Ile Gln Ala Ile Tyr Gly Leu Ser Ser Asn Pro Ile Gln Pro Thr Gly Pro Ser Thr Pro Lys Pro Cys Asp Pro Ser Leu Thr Phe Asp Ala Ile Thr Thr Leu Arg Gly Glu Ile Leu Phe Phe Lys Asp Arg Tyr Phe Trp Arg Arg His Pro Gln Leu Gln Arg Val Glu Met Asn Phe Ile Ser Leu Phe Trp Pro Ser Leu Pro Thr Gly Ile Gln Ala Ala Tyr Glu Asp Phe Asp Arg Asp Leu Ile Phe Leu Phe Lys Gly Asn Gln Tyr Trp Ala Leu Ser Gly Tyr Asp Ile Leu Gln Gly Tyr Pro Lys Asp Ile Ser Asn Tyr Gly Phe Pro Ser Ser Val Gln Ala Ile Asp Ala Ala Val Phe Tyr Arg Ser Lys Thr Tyr Phe Phe Val Asn Asp Gln Phe Trp Arg Tyr Asp Asn Gln Arg Gln Phe Met Glu Pro Gly Tyr Pro Lys Ser Ile Ser Gly Ala Phe Pro Gly Ile Glu Ser Lys Val Asp Ala Val Phe Gln Glu His

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Cys Thr Thr Ala Cys Thr Cys Cys Ala Thr Gly Thr Gly Cys Ala Gly 35 40 45

Ala Thr Thr Cys Cys Ala Ala Gly Gly Cys Cys Thr Thr Cys
50 55 60

Cys Thr Gly Thr Ala Thr Cys Thr Thr Cys Thr Ala Ala Gly Ala 65 70 75 80

Gly Ala Ala Ala Ala Thr Ala Cys Ala Ala Ala Ala Cys Thr 85 90 95

Gly Thr Thr Cys Ala Gly Gly Ala Cys Thr Ala Cys Cys Thr Gly Gly 100 105 110

Ala Ala Ala Gly Thr Thr Cys Thr Ala Cys Cys Ala Ala Thr Thr
115 120 125

Ala Cys Cys Ala Ala Gly Cys Ala Ala Cys Cys Ala Gly Thr Ala Thr 130 135 140

Cys Ala Gly Thr Cys Thr Ala Cys Ala Ala Gly Gly Ala Ala Gly Ala 145 150 155 160

Ala Thr Gly Gly Cys Ala Cys Thr Ala Ala Thr Gly Thr Gly Ala Thr

				165					170					175	
Cys	Gly	Thr	Thr 180	Gly	Ala	Ala	Ala	Ala 185	Gly	Cys	Thr	Thr	Ala 190	Ala	Ala
Gly	Ala	Ala 195	Ala	Thr	Gly	Cys	Ala 200	Gly	Cys	Gly	Ala	Thr 205	Thr	Thr	Thr
Thr	Thr 210	Gly	Gly	Gly	Thr	Thr 215	Gly	Ala	Ala	Thr	Gly 220	Thr	Gly	Ala	Cys
Gly 225	Gly	Gly	Gly	Ala	Ala 230	Gly	Cys	Cys	Ala	Ala 235	Ala	Thr	Gly	Ala	Gly 240
Gly	Ala	Ala	Ala	Cys 245	Thr	Cys	Thr	Gly	Gly 250	Ala	Cys	Ala	Thr	Gly 255	Ala
Thr	Gly	Ala	Ala 260	Ala	Ala	Ala	Gly	Cys 265	Cys	Thr	Сув	Gly	Cys 270	Thr	Gly
Thr	Gly	Gly 275	Ala	Gly	Thr	Gly	Cys 280	Cys	Thr	Gly	Ala	Cys 285	Ala	Gly	Thr
Gly	Gly 290	Thr	Gly	Gly	Thr	Thr 295	Thr	Thr	Ala	Thr	Gly 300	Thr	Thr	Ala	Ala
Cys 305	Cys	Cys	Cys	Ala	Gly 310	Gly	Ala	Ala	Ala	Cys 315	Cys	Cys	Cys	Ala	Ala 320
Gly	Thr	Gly	Gly	Gly 325	Ala	Ala	Cys	Gly	Cys 330	Ala	Суѕ	Thr	Ala	Ala 335	Cys
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Gly	Ala	Ala 355	Ala	Cys	Thr	Ala	Thr 360	Ala	Cys	Cys	Cys	Cys 365	Ala	Cys	Ala
Gly	Cys 370	Thr	Gly	Thr	Cys	Ala 375	Gly	Ala	Gly	Gly	Cys 380	Thr	Gly	Ala	Gly
Gly 385	Thr	Ala	Gly	Ala	Ala 390	Ala	Gly	Ala	Gly	Cys 395	Thr	Ala	Thr	Cys	Ala 400
Ala	Gly	Gly	Ala	Thr 405	Gly	Cys	Cys	Thr	Thr 410	Thr	Gly	Ala	Ala	Cys 415	Thr

Cys Thr Gly Gly Ala Gly Thr Gly Thr Thr Gly Cys Ala Thr Cys Ala

420	425	430

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G	lу	Gly 450	Ala	Thr	Cys	Thr	Cys 455	Ala	Cys	Ala	Gly	Gly 460	Gly	Ala	Gly	Ala
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G	lу	Cys	Thr	Thr	Thr 485	Thr	Thr	Ala	Cys	Cys 490	Ala	Ala	Ala	Gly	Ala 495	Gly
P	la	Thr	Cys	Ala 500	Cys	Gly	Gly	Thr	Gly 505	Ala	Cys	Ala	Ala	Thr 510	Thr	Cys
			515					520					525	Суѕ	_	
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					565					570				Gly	575	
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			595			_		600		-			605	Gly		-
		610					615					620		Ala		
6	25					630					635			Thr		640
					645					650				Ala	655	
Т	hr	Gly	Gly	Cys 660	Cys	Ala	Thr	Thr	Cys 665	Thr	Thr	Thr	Gly	Gly 670	Gly	Gly
С	ys	Thr	Cys	Gly	Cys	Thr	Cys	Ala	Cys	Thr	Cys	Cys	Thr	Cys	Thr	Gly

675	680	685

Ala Cys Cys Cys Thr Gly Gly Thr Gly Cys Cys Thr Thr Gly Ala Thr Gly Thr Ala Thr Cys Cys Cys Ala Ala Cys Thr Ala Thr Gly Cys Thr Thr Thr Cys Ala Gly Gly Ala Ala Ala Cys Cys Ala Gly Cys Ala Ala Cys Thr Ala Cys Thr Cys Ala Cys Thr Cys Cys Cys Thr Cys Ala Ala Gly Ala Thr Gly Ala Cys Ala Thr Cys Gly Ala Thr Gly Gly Cys Ala Thr Thr Cys Ala Gly Gly Cys Cys Ala Thr Cys Thr Ala Thr Gly Gly Ala Cys Thr Thr Cys Ala Ala Gly Cys Ala Ala Cys Cys Cys Thr Ala Thr Cys Cys Ala Ala Cys Cys Thr Ala Cys Thr Gly Gly Ala Cys Cys Ala Ala Gly Cys Ala Cys Ala Cys Cys Cys Ala Ala Ala Cys Cys Cys Thr Gly Thr Gly Ala Cys Cys Cys Cys Ala Gly Thr Thr Gly Ala Cys Ala Thr Thr Gly Ala Thr Gly Cys Thr Ala Thr Cys Ala Cys Cys Ala Cys Ala Cys Thr Cys Cys Gly Thr Gly Gly Ala Gly Ala Ala Thr Ala Cys Thr Thr Thr Cys Thr Thr Thr Ala Ala Ala Gly Ala Cys Ala Gly Gly Thr Ala Cys Thr Thr Cys Thr Gly Gly Ala Gly Ala Ala Gly Gly Cys Ala Thr Cys Cys Thr Cys Ala Gly Cys

Thr Ala Cys Ala Ala Ala Gly Ala Gly Thr Cys Gly Ala Ala Ala Thr

Gly	Ala	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Thr	Thr	Cys	Thr	Cys	Thr	Ala
945					950					955					960

- Thr Thr Cys Thr Gly Gly Cys Cys Ala Thr Cys Cys Cys Thr Thr Cys
- Cys Ala Ala Cys Thr Gly Gly Thr Ala Thr Ala Cys Ala Gly Gly Cys
- Thr Gly Cys Thr Thr Ala Thr Gly Ala Ala Gly Ala Thr Thr Thr Thr
- Gly Ala Cys Ala Gly Ala Gly Ala Cys Cys Thr Cys Ala Thr Thr
- Thr Cys Cys Thr Ala Thr Thr Ala Ala Ala Gly Gly Cys Ala Ala
- Cys Cys Ala Ala Thr Ala Cys Thr Gly Gly Cys Thr Cys Thr Gly
- Ala Gly Thr Gly Gly Cys Thr Ala Thr Gly Ala Thr Ala Thr Cys
- Thr Gly Cys Ala Ala Gly Gly Thr Thr Ala Thr Cys Cys Cys Ala Ala
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- Thr Cys Cys Ala Ala Gly Cys Ala Ala Thr Thr Gly Ala Cys Gly Cys
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- Thr Thr Gly Thr Ala Ala Ala Thr Gly Ala Cys Cys Ala Ala Thr Thr
- Cys Thr Gly Gly Ala Gly Ala Thr Ala Thr Gly Ala Thr Ala Ala Cys

Cys Ala Ala Gly Ala Cys Ala Ala Thr Thr Cys Ala Thr Gly Gly
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Thr Thr Cys Cys Ala Gly Gly Ala Ala Thr Ala Gly Ala Gly Ala 1250 1255 1260

Gly Thr Ala Ala Gly Thr Thr Gly Ala Thr Gly Cys Ala Gly Thr 1265 1270 1275 1280

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1285 1290 1295

Thr Thr Cys Thr Thr Cys Cys Ala Thr Gly Thr Cys Thr Thr Cys Ala 1300 1305 1310

Gly Thr Gly Gly Ala Cys Cys Ala Ala Gly Ala Thr Ala Thr Thr Ala 1315 1320 1325

Cys Gly Cys Ala Thr Thr Gly Ala Thr Cys Thr Thr Ala Thr Thr 1330 1335 1340

Gly Cys Thr Cys Ala Gly Ala Gly Ala Gly Thr Thr Ala Cys Cys Ala 1345 1350 1355 1360

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<211> 471

<212> PRT

<213> Homo sapiens

<400> 178

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Leu	Val	Gln 35	Ser	Lys	Asn	Arg	Ser 40	Leu	Ile	Asp	Asp	Lys 45	Ile	Arg	Glu
Met	Gln 50	Ala	Phe	Phe	Gly	Leu 55	Thr	Val	Thr	Gly	Lys 60	Leu	Asp	Ser	Asn
Thr 65	Leu	Glu	Ile	Met	Lys 70	Thr	Pro	Arg	Cys	Gly 75	Val	Pro	Asp	Val	Gly 80
Gln	Tyr	Gly	Tyr	Thr 85	Leu	Pro	Gly	Trp	Arg 90	Lys	Tyr	Asn	Leu	Thr 95	Tyr
Arg	Ile	Ile	Asn 100	Tyr	Thr	Pro	Asp	Met 105	Ala	Arg	Ala	Ala	Val 110	Asp	Glu
Ala	Ile	Gln 115	Glu	Gly	Leu	Glu	Val 120	Trp	Ser	Lys	Val	Thr 125	Pro	Leu	Lys
Phe	Thr 130	Lys	Ile	Ser	Lys	Gly 135	Ile	Ala	Asp	Ile	Met 140	Ile	Ala	Phe	Arg
Thr 145	Arg	Val	His	Gly	Arg 150	Cys	Pro	Arg	Tyr	Phe 155	Asp	Gly	Pro	Leu	Gly 160
Val	Leu	Gly	His	Ala 165	Phe	Pro	Pro	Gly	Pro 170	Gly	Leu	Gly	Gly	Asp 175	Thr
His	Phe	Asp	Glu 180	Asp	Glu	Asn	Trp	Thr 185	Lys	Asp	Gly	Ala	Gly 190	Phe	Asn
Leu	Phe	Leu 195	Val	Ala	Ala	His	Glu 200	Phe	Gly	His	Ala	Leu 205	Gly	Leu	Ser
His	Ser 210	Asn	Asp	Gln	Thr	Ala 215	Leu	Met	Phe	Pro	Asn 220	Tyr	Val	Ser	Leu
Asp 225	Pro	Arg	Lys	Tyr	Pro 230	Leu	Ser	Gln	Asp	Asp 235	Ile	Asn	Gly	Ile	Gln 240
Ser	Ile	Tyr	Gly	Gly	Leu	Pro	Lys	Val	Pro		Lys	Pro	Lys	Glu 255	Pro

Thr Ile Pro His Ala Cys Asp Pro Asp Leu Thr Phe Asp Ala Ile Thr 260 265 270

Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu Trp Arg 275 280 285

Ile Tyr Tyr Asp Ile Thr Asp Val Glu Phe Glu Leu Ile Ala Ser Phe 290 295 300

Trp Pro Ser Leu Pro Ala Asp Leu Gln Ala Ala Tyr Glu Asn Pro Arg 305 310 315 320

Asp Lys Ile Leu Val Phe Lys Asp Glu Asn Phe Trp Met Ile Arg Gly 325 330 335

Tyr Ala Val Leu Pro Asp Tyr Pro Lys Ser Ile His Thr Leu Gly Phe 340 345 350

Pro Gly Arg Val Lys Lys Ile Asp Ala Ala Val Cys Asp Lys Thr Thr 355 360 365

Arg Lys Thr Tyr Phe Phe Val Gly Ile Trp Cys Trp Arg Phe Asp Glu 370 380

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Thr	Ser	Ser 115	Pro	Leu	Ser	Asp	Val 120	Asn	Leu	Ser	His	Asn 125	Gln	Leu	Arg
Glu	Val 130	Ser	Val	Ser	Ala	Phe 135	Thr	Thr	His	Ser	Gln 140	Gly	Arg	Ala	Leu
His 145	Val	Asp	Leu	Ser	His 150	Asn	Leu	Ile	His	Arg 155	Leu	Val	Pro	His	Pro 160
Thr	Arg	Ala	Gly	Leu 165	Pro	Ala	Pro	Thr	Ile 170	Gln	Ser	Leu	Asn	Leu 175	Ala
Trp	Asn	Arg	Leu 180	His	Ala	Val	Pro	Asn 185	Leu	Arg	Asp	Leu	Pro 190	Leu	Arg
Tyr	Leu	Ser 195	Leu	Asp	Gly	Asn	Pro 200	Leu	Ala	Val	Ile	Gly 205	Pro	Gly	Ala
Phe	Ala 210	Gly	Leu	Gly	Gly	Leu 215	Thr	His	Leu	Ser	Leu 220	Ala	Ser	Leu	Gln
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Gln	Val	Leu	Asp	Leu 245	Ser	Gly	Asn	Pro	Lys 250	Leu	Asn	Trp	Ala	Gly 255	Ala
Glu	Val	Phe	Ser 260	Gly	Leu	Ser	Ser	Leu 265	Gln	Glu	Leu	Asp	Leu 270	Ser	Gly
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Arg 305	Glu	Gly	Thr	Tyr	Pro 310	Arg	Arg	Pro	Gly	Ser 315	Ser	Pro	Lys	Val	Ala 320
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Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp 35 40 45

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly 50 55 60

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu 65 70 75 80

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser 85 90 95

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe 100 105 110

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg 115 120 125

Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu 130 135 140

His Val Asp Leu Ser His Asn Leu Ile His Arg Leu Val Pro His Pro 145 150 155 160

Thr Arg Ala Gly Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala 165 170 175

Trp Asn Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg
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Tyr Leu Ser Leu Asp Gly Asn Pro 195 200 <210> 197

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Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser 35 40 45

Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro 50 55 60

Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu 65 70 75 80

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35 40 45

Val Thr Leu Pro Asp Ala Phe Leu Pro Ala Gln Val Cys Ser Ala Arg
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Trp	Glu	Ile	His 100	Ser	Phe	Tyr	Leu	His 105	Ala	Leu	Arg	Ile	Pro 110	Met	Ser
Ala	Leu	Pro 115	Tyr	Cys	Thr	Trp	Gln 120	Glu	Val	Gln	Ala	Arg 125	Ile	Val	Gln
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Gly	Glu	Ala	Val 180	Phe	Phe	Thr	Arg	Gly 185	Leu	Lys	Tyr	Asn	Phe 190	Glu	Leu
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Pro	Leu	Ile	Leu	Ile 245	Trp	Gln	Ile	Leu	Tyr 250	Ala	Phe	Phe	Ser	Tyr 255	Ala
Glu	Val	Leu	Lys 260	Arg	Glu	Pro	Gly	Ala 265	Leu	Gly	Ala	Arg	Cys 270	Trp	Ser
Leu	Tyr	Gly 275	Arg	Cys	Tyr	Leu	Arg 280	His	Phe	Asn	Glu	Leu 285	Glu	His	Glu
Leu	Gln 290	Ser	Arg	Leu	Asn	Arg 295	Gly	Tyr	Lys	Pro	Ala 300	Ser	Lys	Tyr	Met
Asn 305	Cys	Phe	Leu	Ser	Pro 310	Leu	Leu	Thr	Leu	Leu 315	Ala	Lys	Asn	Gly	Ala 320

Phe Phe Ala Gly Ser Ile Leu Ala Val Leu Ile Ala Leu Thr Ile Tyr Asp Glu Asp Val Leu Ala Val Glu His Val Leu Thr Thr Val Thr Leu Leu Gly Val Thr Val Thr Val Cys Arg Ser Phe Ile Pro Asp Gln His Met Val Phe Cys Pro Glu Gln Leu Leu Arg Val Ile Leu Ala His Ile His Tyr Met Pro Asp His Trp Gln Gly Asn Ala His Arg Ser Gln Thr Arg Asp Glu Phe Ala Gln Leu Phe Gln Tyr Lys Ala Val Phe Ile Leu Glu Glu Leu Leu Ser Pro Ile Val Thr Pro Leu Ile Leu Ile Phe Cys Leu Arg Pro Arg Ala Leu Glu Ile Ile Asp Phe Phe Arg Asn Phe Thr Val Glu Val Val Gly Val Gly Asp Thr Cys Ser Phe Ala Gln Met Asp Val Arg Gln His Gly His Pro Gln Trp Leu Ser Ala Gly Gln Thr Glu Ala Ser Val Tyr Gln Gln Ala Glu Asp Gly Lys Thr Glu Leu Ser Leu Met His Phe Ala Ile Thr Asn Pro Gly Trp Gln Pro Pro Arg Glu Ser Thr Ala Phe Leu Gly Phe Leu Lys Glu Gln Val Gln Arg Asp Gly Ala Ala Ala Ser Leu Ala Gln Gly Gly Leu Leu Pro Glu Asn Ala Leu Phe Thr Ser Ile Gln Ser Leu Gln Ser Glu Ser Glu Pro Leu Ser Leu Ile Ala Asn Val Val Ala Gly Ser Ser Cys Arg Gly Pro Pro Leu Pro Arg

Asp Leu Gln Gly Ser Arg His Arg Ala Glu Val Ala Ser Ala Leu Arg Ser Phe Ser Pro Leu Gln Pro Gly Gln Ala Pro Thr Gly Arg Ala His Ser Thr Met Thr Gly Ser Gly Val Asp Ala Arg Thr Ala Ser Ser Gly Ser Ser Val Trp Glu Gly Gln Leu Gln Ser Leu Val Leu Ser Glu Tyr Ala Ser Thr Glu Met Ser Leu His Ala Leu Tyr Met His Gln Leu His Lys Gln Gln Ala Gln Ala Glu Pro Glu Arg His Val Trp His Arg Arg Glu Ser Asp Glu Ser Gly Glu Ser Ala Pro Asp Glu Gly Gly Glu Gly Ala Arg Ala Pro Gln Ser Ile Pro Arg Ser Ala Ser Tyr Pro Cys Ala Ala Pro Arg Pro Gly Ala Pro Glu Thr Thr Ala Leu His Gly Gly Phe Gln Arg Arg Tyr Gly Gly Ile Thr Asp Pro Gly Thr Val Pro Arg Val Pro Ser His Phe Ser Arg Leu Pro Leu Gly Gly Trp Ala Glu Asp Gly Gln Ser Ala Ser Arg His Pro Glu Pro Val Pro Glu Glu Gly Ser Glu Asp Glu Leu Pro Pro Gln Val His Lys Val <210> 204 <211> 25 <212> PRT <213> Homo sapiens <400> 204

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Ala Phe Thr Thr Phe Leu Val Ser Cys
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Ala Gln Val Cys Ser Ala Arg Ile Gln Glu Asn Gly Ser Leu Ile Thr 35 40 45

Ile Leu Val Ile Ala Gly Val Phe Trp Ile His Arg Leu Ile Lys Phe 50 55 60

Ile Tyr Asn Ile Cys Cys Tyr Trp Glu Ile His Ser Phe Tyr Leu His 65 70 75 80

Ala Leu Arg Ile Pro Met Ser Ala Leu Pro Tyr Cys Thr Trp Gln Glu 85 90 95

Val Gln Ala Arg Ile Val Gln Thr Gln Lys Glu His Gln Ile Cys Ile 100 105 110

His Lys Arg Glu Leu Thr Glu Leu Asp Ile Tyr His Arg Ile Leu Arg 115 120 125

Phe Gln Asn Tyr Met Val Ala Leu Val Asn Lys Ser Leu Leu Pro Leu 130 135 140

Arg Phe Arg Leu Pro Gly Leu Gly Glu Ala Val Phe Phe Thr Arg Gly
145 150 155 160

Leu Lys Tyr Asn Phe Glu Leu Ile Leu Phe Trp Gly Pro Gly Ser Leu
165 170 175

Phe Leu Asn Glu Trp Ser Leu Lys Ala Glu Tyr Lys Arg Gly Gln
180 185 190

Arg Leu Glu Leu Ala Gln Arg Leu Ser Asn Arg Ile Leu Trp Ile Gly

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Leu	Gly	Ala	Arg	Cys 245	Trp	Ser	Leu	Tyr	Gly 250	Arg	Cys	Tyr	Leu	Arg 255	His
Phe	Asn	Glu	Leu 260	Glu	His	Glu	Leu	Gln 265	Ser	Arg	Leu	Asn	Arg 270	Gly	Tyr
Lys	Pro	Ala 275	Ser	Lys	Tyr	Met	Asn 280	Cys	Phe	Leu	Ser	Pro 285	Leu	Leu	Thr
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Pro	Leu	Ile	Leu	Ile 405	Phe	Cys	Leu	Arg	Pro 410	Arg	Ala	Leu	Glu	Ile 415	Ile
Asp	Phe	Phe	Arg 420	Asn	Phe	Thr	Val	Glu 425	Val	Val	Gly	Val	Gly 430	Asp	Thr
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Arg 545	Gly	Pro	Pro	Leu	Pro 550	Arg	Asp	Leu	Gln	Gly 555	Ser	Arg	His	Arg	Ala 560
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Ser	Leu 610	Val	Leu	Ser	Glu	Tyr 615	Ala	Ser	Thr	Glu	Met 620	Ser	Leu	His	Ala
Leu 625	Tyr	Met	His	Gln	Leu 630	His	Lys	Gln	Gln	Ala 635	Gln	Ala	Glu	Pro	Glu 640
Arg	His	Val	Trp	His 645	Arg	Arg	Glu	Ser	Asp 650	Glu	Ser	Gly	Glu	Ser 655	Ala
Pro	Asp	Glu	Gly 660	Gly	Glu	Gly	Ala	Arg 665	Ala	Pro	Gln	Ser	Ile 670	Pro	Arg
Ser	Ala	Ser 675	Tyr	Pro	Cys	Ala	Ala 680	Pro	Arg	Pro	Gly	Ala 685	Pro	Glu	Thr

Thr Ala Leu His Gly Gly Phe Gln Arg Arg Tyr Gly Gly Ile Thr Asp

Pro Gly Thr Val Pro Arg Val Pro Ser His Phe Ser Arg Leu Pro Leu

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Gly Gly Trp Ala Glu Asp Gly Gln Ser Ala Ser Arg His Pro Glu Pro 725 730 735

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<213> Homo sapiens

<400> 206

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Ala Gln Val Cys Ser Ala Arg Ile Gln Glu Asn Gly Ser 35 40 45

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<400> 207

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Ile

<210> 208

<211> 141

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<400> 208

Lys Phe Ile Tyr Asn Ile Cys Cys Tyr Trp Glu Ile His Ser Phe Tyr

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Gln Glu Val Gln Ala Arg Ile Val Gln Thr Gln Lys Glu His Gln Ile $35 \hspace{1cm} 40 \hspace{1cm} 45$

Cys Ile His Lys Arg Glu Leu Thr Glu Leu Asp Ile Tyr His Arg Ile 50 55 60

Leu Arg Phe Gln Asn Tyr Met Val Ala Leu Val Asn Lys Ser Leu Leu 65 70 75 80

Pro Leu Arg Phe Arg Leu Pro Gly Leu Gly Glu Ala Val Phe Phe Thr 85 90 95

Arg Gly Leu Lys Tyr Asn Phe Glu Leu Ile Leu Phe Trp Gly Pro Gly
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<400> 209

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Glu His Glu Leu Gln Ser Arg Leu Asn Arg Gly Tyr Lys Pro Ala Ser
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Lys Tyr Met Asn Cys Phe Leu Ser Pro Leu Leu Thr Leu Leu Ala Lys
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Asn Gly
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Ser Phe Ile

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Pro Leu Pro Arg Asp Leu Gln Gly Ser Arg His Arg Ala Glu Val Ala

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Gly	Arg	Ala	His	Ser 245	Thr	Met	Thr	Gly	Ser 250	Gly	Val	Asp	Ala	Arg 255	Thr
Ala	Ser	Ser	Gly 260	Ser	Ser	Val	Trp	Glu 265	Gly	Gln	Leu	Gln	Ser 270	Leu	Val
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His	Gln 290	Leu	His	Lys	Gln	Gln 295	Ala	Gln	Ala	Glu	Pro 300	Glu	Arg	His	Val
Trp 305	His	Arg	Arg	Glu	Ser 310	Asp	Glu	Ser	Gly	Glu 315	Ser	Ala	Pro	Asp	Glu 320
Gly	Gly	Glu	Gly	Ala 325	Arg	Ala	Pro	Gln	Ser 330	Ile	Pro	Arg	Ser	Ala 335	Ser
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Val	Pro 370	Arg	Val	Pro	Ser	His 375	Phe	Ser	Arg	Leu	Pro 380	Leu	Gly	Gly	Trp
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Tyr Lys Arg Gly Gln Arg Leu Glu Leu Ala Gln Arg Leu Ser Asn Arg Ile Leu Trp Ile Gly Ile Ala Asn Phe Leu Leu Cys Pro Leu Ile Leu Ile Trp Gln Ile Leu Tyr Ala Phe Phe Ser Tyr Ala Glu Val Leu Lys Arg Glu Pro Gly Ala Leu Gly Ala Arg Cys Trp Ser Leu Tyr Gly Arg Cys Tyr Leu Arg His Phe Asn Glu Leu Glu His Glu Leu Gln Ser Arg Leu Asn Arg Gly Tyr Lys Pro Ala Ser Lys Tyr Met Asn Cys Phe Leu Ser Pro Leu Leu Thr Leu Leu Ala Lys Asn Gly Ala Phe Phe Ala Gly Ser Ile Leu Ala Val Leu Ile Ala Leu Thr Ile Tyr Asp Glu Asp Val Leu Ala Val Glu His Val Leu Thr Thr Val Thr Leu Leu Gly Val Thr Val Thr Val Cys Arg Ser Phe Ile Pro Asp Gln His Met Val Phe Cys Pro Glu Gln Leu Leu Arg Val Ile Leu Ala His Ile His Tyr Met Pro Asp His Trp Gln Gly Asn Ala His Arg Ser Gln Thr Arg Asp Glu Phe Ala Gln Leu Phe Gln Tyr Lys Ala Val Phe Ile Leu Glu Glu Leu Leu Ser Pro Ile Val Thr Pro Leu Ile Leu Ile Phe Cys Leu Arg Pro Arq Ala Leu Glu Ile Ile Asp Phe Phe Arg Asn Phe Thr Val Glu Val Val Gly Val Gly Asp Thr Cys Ser Phe Ala Gln Met Asp Val Arg Gln

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Arg	Thr	Ala	Ser 660	Ser	Gly	Ser	Ser	Val 665	Trp	Glu	Gly	Gln	Leu 670	Gln	Ser
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His 705	Val	Trp	His	Arg	Arg 710	Glu	Ser	Asp	Glu	Ser 715	Gly	Glu	Ser	Ala	Pro 720
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Ala	Ser	Tyr	Pro 740	Cys	Ala	Ala	Pro	Arg 745	Pro	Gly	Ala	Pro	Glu 750	Thr	Thr
Ala	Leu	His 755	Gly	Gly	Phe	Gln	Arg 760	Arg	Tyr	Gly	Gly	Ile 765	Thr	Asp	Pro
Gly	Thr 770	Val	Pro	Arg	Val	Pro 775	Ser	His	Phe	Ser	Arg 780	Leu	Pro	Leu	Gly

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Pro Glu Glu Gly Ser Glu Asp Glu Leu Pro Pro Gln Val His Lys Val
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His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val
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Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg
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Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln
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Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp 100 105 110

Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile 115 120 125

Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His 130 135 140

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Lys Gln Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys 50 55 60

Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp
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Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp 100 105 110

Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His 115 120 125

Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val 130 135 140

Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met 145 150 155 160

Leu Met Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His 165 170 175

Asp Gln Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met 180 185 190

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Leu
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<400> 228
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Gln Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe
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                                  25
Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr
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Ile Phe Ile Ile Leu Arg Lys Gln Lys
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Leu Ile Phe Leu His Trp Tyr His His Ile Thr Val Leu Leu Tyr Ser
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Trp

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Tyr Ser Tyr Lys Asp Met Val Ala Gly Gly Gly
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<213> Homo sapiens
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Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val Met Tyr Ser Tyr
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Tyr Ala Leu
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Arg Ala Ala Gly Phe Arg Val Ser Arg Lys
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<211> 24
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<213> Homo sapiens
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Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met Gly
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Cys Val Val Asn Tyr Leu Val Phe
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<210> 234

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His Phe Phe Phe
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atagtggtcg tctatctgtt gctcatcgtt gttggccaga cctacatgag aacgcggaag 180
agetteaget tgeagaggee teteateete tggteettet teetggeaat atteagtate 240
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<211> 265

<212> PRT

<213> Mus sp.

<400> 239

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Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys
20 25 30

Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg 35 40 45

His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val 50 55 60

Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg
65 70 75 80

Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln
85 90 95

Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp 100 105 110

Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile 115 120 125

Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His 130 135 140

His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp Met Val 145 150 155 160

Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val

165 170 175

Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg 180 185 190

Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met 195 200 205

Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His Asp Gln 210 215 220

Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met Tyr Leu 225 230 235 240

Ser Tyr Leu Val Leu Phe Cys His Phe Phe Glu Ala Tyr Ile Gly 245 250 255

Lys Met Arg Lys Thr Thr Lys Ala Glu 260 265

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<400> 241

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<213> Mus sp.
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            20
                                25
                                                    30
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Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His 35 40 45

Trp Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys 50 55 60

Asp Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val 65 70 75 80

His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg 85 90 95

Val Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln 100 105 110

Met Leu Met Gly Cys Val Ile Asn Tyr Leu Val Phe Asn Trp Met Gln
115 120 125

His Asp Asn Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe Trp Ser 130 135 140

Ser Leu Met Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe 145 150 155 160

Glu Ala Tyr Ile Gly Lys Val Lys Lys Ala Thr Lys Ala Glu 165 170

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<211> 49

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<213> Mus sp.

<400> 244

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Lys Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly
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Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His
35 40 45

Trp

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<213> Mus sp.
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<212> PRT
<213> Mus sp.
<400> 246
Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn
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<211> 19
<212> PRT
<213> Mus sp.
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Tyr Gly Val His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala
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                                                          15
Gly Phe Arg
<210> 248
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<212> PRT
<213> Mus sp.
<400> 248
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<210> 249
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<211> 24

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<212> PRT
<213> Mus sp.
<400> 249
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Val Phe Asn Trp Met Gln His Asp
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<210> 250
<211> 16
<212> PRT
<213> Mus sp.
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<212> DNA
<213> Rattus sp.
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ggttggttca tgactatgaa ctatggcgta cacgccqtca tgtactctta ctacqccttg 180
cgggctgcgg gtttccgggt ctcccggaag tttgccatgt tcatcacgtt gtcccagatc 240
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acgaaggccg agtagtgtca gagctgagga ggaagacata gctcagggtc atcacgaaaa 480
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cccacgcgca tgcagacaca cccacctaca cactatctgc agatgaccag tgtcctatgc 900
aaaaaaaaa aaaa
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<212> PRT

<213> Rattus sp.

<400> 253

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Tyr Lys Asp Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr 35 40 45

Gly Val His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly
50 55 60

Phe Arg Val Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile 65 70 75 80

Thr Gln Met Leu Met Gly Cys Val Ile Asn Tyr Leu Val Phe Asn Trp 85 90 95

Met Gln His Asp Asn Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe 100 105 110

Trp Ser Ser Leu Met Tyr Leu Ser Tyr Leu Leu Leu Phe Cys His Phe
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Phe Phe Glu Ala Tyr Ile Gly Lys Val Lys Lys Ala Thr Lys Ala Glu 130 135 140 <210> 254

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<212> DNA

<213> Homo sapiens

<400> 271

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<213> Homo sapiens
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<212> PRT
<213> Homo sapiens
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Gly Leu Gly Thr Pro Asp Ser Glu Gly Phe Pro Pro Arg Ala Leu His
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                                 25
Asn Cys Pro Tyr Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr
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Asp 65	Leu	Asp	Leu	Ser	His 70	Asn	Ala	Leu	Gln	Arg 75	Leu	Arg	Pro	Gly	Trp 80
Leu	Ala	Pro	Leu	Phe 85	Gln	Leu	Arg	Ala	Leu 90	His	Leu	Asp	His	Asn 95	Glu
Leu	Asp	Ala	Leu 100	Gly	Arg	Gly	Val	Phe 105	Val	Asn	Ala	Ser	Gly 110	Leu	Arç
Leu	Leu	Asp 115	Leu	Ser	Ser	Asn	Thr 120	Leu	Arg	Ala	Leu	Gly 125	Arg	His	Asp
Leu	Asp 130	Gly	Leu	Gly	Ala	Leu 135	Glu	Lys	Leu	Leu	Leu 140	Phe	Asn	Asn	Arg
Leu 145	Val	His	Leu	Asp	Glu 150	His	Ala	Phe	His	Gly 155	Leu	Arg	Ala	Leu	Ser 160
His	Leu	Tyr	Leu	Gly 165	Cys	Asn	Glu	Leu	Ala 170	Ser	Phe	Ser	Phe	Asp 175	His
Leu	His	Gly	Leu 180	Ser	Ala	Thr	His	Leu 185	Leu	Thr	Leu	Asp	Leu 190	Ser	Ser
Asn	Arg	Leu 195	Gly	His	Ile	Ser	Val 200	Pro	Glu	Leu	Ala	Ala 205	Leu	Pro	Ala
Phe	Leu 210	Lys	Asn	Gly	Leu	Tyr 215	Leu ·	His	Asn	Asn	Pro 220	Leu	Pro	Cys	Asp
Cys 225	Arg	Leu	Tyr	His	Leu 230	Leu	Gln	Arg	Trp	His 235	Gln	Arg	Gly	Leu	Ser 240
Ala	Val	Arg	Asp	Phe 245	Ala	Arg	Glu	Tyr	Val 250	Cys	Leu	Ala	Phe	Lys 255	Val
Pro	Ala	Ser	Arg 260	Val	Arg	Phe	Phe	Gln 265	His	Ser	Arg	Val	Phe 270	Glu	Asn
Cys	Ser	Ser 275	Ala	Pro	Ala	Leu	Gly 280	Leu	Lys	Arg	Pro	Glu 285	Glu	His	Leu
Tyr	Ala 290	Leu	Val	Gly	Arg	Ser 295	Leu	Arg	Leu	Tyr	Cys 300	Asn	Thr	Ser	Val

Pro Ala Met Arg Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg

305	310	315	320

Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser 325 330 335

Leu Ala Ile Gly Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys 340 345 350

Leu Ala Thr Gly Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn 355 360 365

Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly 370 375 380

Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu Leu 385 390 395 400

Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu 405 410 415

Pro Pro Leu Ala Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His 420 425 430

Lys Ser Ser Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln
435 440 445

Gly Gln Ala Ser Thr Ser Thr 450 455

<210> 274

<211> 20

<212> PRT

<213> Homo sapiens

<400> 274

Met Thr Trp Leu Val Leu Leu Gly Thr Leu Leu Cys Met Leu Arg Val 1 5 10 15

Gly Leu Gly Thr 20

<210> 275

<211> 435

<212> PRT

<213> Homo sapiens

- 4	~	١.	27	
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- Pro Asp Ser Glu Gly Phe Pro Pro Arg Ala Leu His Asn Cys Pro Tyr

 1 5 10 15
- Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr Gly Leu Gly Leu 20 25 30
- Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu 35 40 45
- Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu 50 55 60
- Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu 65 70 75 80
- Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu 85 90 95
- Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu
 100 105 110
- Gly Ala Leu Glu Lys Leu Leu Phe Asn Asn Arg Leu Val His Leu
 115 120 125
- Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser His Leu Tyr Leu 130 135 140
- Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His Leu His Gly Leu 145 150 155 160
- Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser Asn Arg Leu Gly
 165 170 175
- His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala Phe Leu Lys Asn 180 185 190
- Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp Cys Arg Leu Tyr 195 200 205
- His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser Ala Val Arg Asp 210 215 220
- Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val Pro Ala Ser Arg 225 230 235 240
- Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn Cys Ser Ser Ala 245 250 255

Pro Ala Leu Gly Leu Lys Arg Pro Glu Glu His Leu Tyr Ala Leu Val Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val Pro Ala Met Arg Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys Leu Ala Thr Gly Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Leu Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu Pro Pro Leu Ala Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His Lys Ser Ser Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala Ser Thr Ser Thr <210> 276 <211> 363 <212> PRT <213> Homo sapiens <400> 276 Pro Asp Ser Glu Gly Phe Pro Pro Arg Ala Leu His Asn Cys Pro Tyr

Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr Gly Leu Gly Leu

20	25	30

- Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu 35 40 45
- Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu 50 55 60
- Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu 65 70 75 80
- Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu 85 90 95
- Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu 100 105 110
- Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg Leu Val His Leu
 115 120 125
- Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser His Leu Tyr Leu 130 135 140
- Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His Leu His Gly Leu 145 150 155 160
- Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser Asn Arg Leu Gly 165 170 175
- His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala Phe Leu Lys Asn 180 185 190
- Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp Cys Arg Leu Tyr 195 200 205
- His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser Ala Val Arg Asp 210 215 220
- Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val Pro Ala Ser Arg 225 230 235 240
- Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn Cys Ser Ser Ala 245 250 255
- Pro Ala Leu Gly Leu Lys Arg Pro Glu Glu His Leu Tyr Ala Leu Val 260 265 270
- Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val Pro Ala Met Arg

275 280 285

Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg Ala Pro Gly Ser 290 295 300

Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser Leu Ala Ile Gly 305 310 315 320

Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys Leu Ala Thr Gly 325 330 335

Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn Val Ser Val His 340 345 350

Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr 355 360

<210> 277

<211> 20

<212> PRT

<213> Homo sapiens

<400> 277

Gly Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu 1 5 10 15

Leu Tyr Leu Phe

20

<210> 278

<211> 52

<212> PRT

<213> Homo sapiens

<400> 278

Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu Pro Pro Leu 1 5 10 15

Ala Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His Lys Ser Ser 20 25 30

Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala 35 40 45

Ser Thr Ser Thr

50

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<210> 281

<211> 371

<212> PRT

<213> Homo sapiens

<400> 281

Met Ala Trp Thr Lys Tyr Gln Leu Phe Leu Ala Gly Leu Met Leu Val 1 5 10 15

Thr Gly Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met 20 25 30

Ala Glu Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro Phe
35 40 45

Leu Gln Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala 50 55 60

Phe Tyr Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val 65 70 75 80

Asp Pro Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu 85 90 95

Cys Asp Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr
100 105 110

Ser Ala Ser Ser Phe Gln Met Leu Arg Gly Ala Val Ile Ile Phe Thr 115 120 125

Gly Leu Phe Ser Val Ala Phe Leu Gly Arg Arg Leu Val Leu Ser Gln 130 135 140

Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Gly Leu Ala Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala Ile Gln Met Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His Pro Leu Arg Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser Gly Asn Pro Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln Val Gly Gln Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser Ala Thr Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn Asp Ala Ser

<210> 282 <211> 18 <212> PRT <213> Homo sapiens

<400> 282

Met Ala Trp Thr Lys Tyr Gln Leu Phe Leu Ala Gly Leu Met Leu Val 1 5 10 15

Thr Gly

<210> 283

<211> 353

<212> PRT

<213> Homo sapiens

<400> 283

Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu
1 5 10 15

Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro Phe Leu Gln 20 25 30

Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala Phe Tyr 35 40 45

Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro 50 55 60

Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu Cys Asp
65 70 75 80

Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr Ser Ala 85 90 95

Ser Ser Phe Gln Met Leu Arg Gly Ala Val Ile Ile Phe Thr Gly Leu 100 105 110

Phe Ser Val Ala Phe Leu Gly Arg Arg Leu Val Leu Ser Gln Trp Leu 115 120 125

Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Gly Leu Ala Asp 130 135 140

Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu Val Ile Thr 145 150 155 160

Gly Asp Leu Ieu Ile Ile Met Ala Gln Ile Ile Val Ala Ile Gln Met

Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu 195 200 205

Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser Gly Asn Pro 210 215 220

Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln Val Gly Gln 225 235 240

Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala 245 250 255

Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser Ala Thr 260 265 270

Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu 275 280 285

Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile Leu Gly 290 295 300

Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu His Arg 305 310 315 320

Pro Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu Glu Ser 325 330 335

Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn Asp Ala
340 345 350

Ser

<210> 284

<211> 29

<212> PRT

<213> Homo sapiens

<400> 284

Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu

1 5 10 15

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20
<210> 285
<211> 9
<212> PRT
<213> Homo sapiens
<400> 285
Asn Met Thr Ser Ala Ser Ser Phe Gln
                  5
<210> 286
<211> 14
<212> PRT
<213> Homo sapiens
<400> 286
Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu
                 5
<210> 287
<211> 27
<212> PRT
<213> Homo sapiens
<400> 287
Pro Ala Gly Ser Phe Ser Gly Asn Pro Arg Gly Thr Leu Glu Asp Ala
Leu Asp Ala Phe Cys Gln Val Gly Gln Gln Pro
                                 25
             20
<210> 288
<211> 7
<212> PRT
<213> Homo sapiens
<400> 288
Glu Ala Phe His Ala Leu Gln
 1
                  5
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Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro

<210> 289

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<211> 21
<212> PRT
<213> Homo sapiens
<400> 289
Phe Leu Gln Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala
                                      10
Ala Phe Tyr Leu Leu
             20
<210> 290
<211> 21
<212> PRT
<213> Homo sapiens
<400> 290
Leu Leu Phe Leu Pro Pro Ala Leu Cys Asp Met Thr Gly Thr Ser Leu
                  5
                                      10
                                                           15
Met Tyr Val Ala Leu
             20
<210> 291
<211> 19
<212> PRT
<213> Homo sapiens
<400> 291
Met Leu Arg Gly Ala Val Ile Ile Phe Thr Gly Leu Phe Ser Val Ala
                  5
                                      10
                                                           15
Phe Leu Gly
<210> 292
<211> 17
<212> PRT
<213> Homo sapiens
<400> 292
Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu
                                      10
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Ala

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<210> 293
<211> 17
<212> PRT
<213> Homo sapiens
<400> 293
Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala
                  5
Ile
<210> 294
<211> 18
<212> PRT
<213> Homo sapiens
<400> 294
Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu Val Pro Met Tyr
                                     10
Tyr Ile
<210> 295
<211> 23
<212> PRT
<213> Homo sapiens
<400> 295
Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala Phe Phe
                                     10
                                                          15
Asn Phe Ala Gly Ile Ser Val
             20
<210> 296
<211> 20
<212> PRT
<213> Homo sapiens
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<400> 296

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Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu Ser Leu
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                                      10
Ala Leu Gly Trp
             20
<210> 297
<211> 17
<212> PRT
<213> Homo sapiens
<400> 297
Ile Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly
                  5
                                      10
Leu
<210> 298
<211> 20
<212> PRT
<213> Homo sapiens
<400> 298
Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro Gln Gln
                  5
                                      10
                                                          15
Pro Phe Asn Pro
             20
<210> 299
<211> 7
<212> PRT
<213> Homo sapiens
<400> 299
Arg Arg Leu Val Leu Ser Gln
 1
                  5
<210> 300
<211> 23
<212> PRT
<213> Homo sapiens
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<400> 300
Gln Met Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His Pro
                                     10
Leu Arg Ala Val Gly Thr Glu
             20
<210> 301
<211> 9
<212> PRT
<213> Homo sapiens
<400> 301
Thr Lys Glu Leu Ser Ala Thr Thr Arg
                  5
<210> 302
<211> 35
<212> PRT
<213> Homo sapiens
<400> 302
His Arg Pro Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu
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Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn
                                 25
Asp Ala Ser
         35
<210> 303
<211> 2811
<212> DNA
<213> Homo sapiens
<400> 303
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gaggtgtggt ggaaccttgt gccgcgtaag acagtgtctt ctggggagct ggccacggta 180
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actgggette tgtacgtggg cgcccgagag gccctgtttg ccttcagcat ggaggccctg 300
gagetgeaag gagegatete etgggaggee eeegtggaga agaagaetga gtgtateeag 360
aaagggaaga acaaccagac cgagtgcttc aacttcatcc gcttcctgca gccctacaat 420
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cttagaacat gctcaccttc actttggagc atggagagtt tgaagatggg aagggcaagt 660
gtccctatga cccagctaag ggccatgctg gccttcttgt ggatggtgag ctgtactcgg 720
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teagggageg ggeagtggag teegaetget atgeegagea ggtggtgget egtgtggeee 960
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<210> 304
<211> 729
<212> DNA
<213> Homo sapiens
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<400> 304

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<210> 305

<211> 243

<212> PRT

<213> Homo sapiens

<400> 305

Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Arg Leu Trp Gly
1 5 10 15

Leu Gly Ile Gly Ala Glu Val Trp Trp Asn Leu Val Pro Arg Lys Thr
20 25 30

Val Ser Ser Gly Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr 35 40 45

Gly Ile Gln Asp Phe Leu Thr Leu Thr Leu Thr Glu Pro Thr Gly Leu 50 55 60

Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala 65 70 75 80

Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys
85 90 95

Thr Glu Cys Ile Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn 100 105 110

Phe Ile Arg Phe Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys 115 120 125

Gly Thr Tyr Ala Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala 130 135 140

Leu Leu Pro Arg Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp

Thr Arg Gly Cys Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile 165 170 175

Thr Ser Leu Ser Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met 180 185 190

Glu Ser Leu Lys Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg 195 200 205

Ala Met Leu Ala Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser 210 215 220

Thr Thr Ser Trp Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro 225 230 235 240

Thr Thr Pro

<210> 306

<211> 20

<212> PRT

<213> Homo sapiens

<400> 306

Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Arg Leu Trp Gly
1 5 10 15

Leu Gly Ile Gly

<210> 307

<211> 223

<212> PRT

<213> Homo sapiens

<400> 307

Ala Glu Val Trp Trp Asn Leu Val Pro Arg Lys Thr Val Ser Ser Gly
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Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr Gly Ile Gln Asp 20 25 30

Phe Leu Thr Leu Thr Glu Pro Thr Gly Leu Leu Tyr Val Gly
35 40 45

55 60 Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys Thr Glu Cys Ile 65 70 75 Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn Phe Ile Arg Phe 85 90 Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys Gly Thr Tyr Ala 100 105 110 Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala Leu Leu Pro Arq 115 120 125 Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp Thr Arg Gly Cys 130 135 140 Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile Thr Ser Leu Ser 145 150 155 Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met Glu Ser Leu Lys 165 170 Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg Ala Met Leu Ala 180 185 190 Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser Thr Thr Ser Trp 195 200 205 Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro Thr Thr Pro 210 215 220 <210> 308 <211> 2498 <212> DNA <213> Homo sapiens <400> 308 gtcgacccac gcgtccgcgg acgcgtgggc gcgcgggggc catccagacc ctgcggagag 60 cgaggcccgg agcgtcgccg aggtttgagg gcgccggaga ccgagggcct ggcgccgaa 120 ggaaccgccc caagaagagc ctctggcccg ggggctgctg gaacatgtgc ggggggacac 180 agtttgtttg acagttgcca gactatgttt acgcttctgg ttctactcag ccaactgccc 240 acagttaccc tggggtttcc tcattgcgca agaggtccaa aggcttctaa gcatgcggga 300 gaagaagtgt ttacatcaaa agaagaagca aactttttca tacatagacg ccttctgtat 360 aatagatttg atctggagct cttcactccc ggcaacctag aaagagagtg caatgaagaa 420

Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala Leu Glu Leu Gln

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<210> 309
<211> 678
<212> DNA
<213> Homo sapiens
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<400> 309

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<210> 310

<211> 226

<212> PRT

<213> Homo sapiens

<400> 310

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Gly Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly
20 25 30

Glu Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg 35 40 45

Arg Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn 50 55 60

Leu Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg
65 70 75 80

Glu Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr
85 90 95

Ser Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile 100 105 110

Asp Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu 115 120 125

Val Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn 130 135 140

Arg Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His 145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro 165 170 175

Leu Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala 180 185 Val Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro 195 200 205 Gly His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro 210 215 220 Ser His 225 <210> 311 <211> 17 <212> PRT <213> Homo sapiens <400> 311 Met Phe Thr Leu Leu Val Leu Leu Ser Gln Leu Pro Thr Val Thr Leu 10 Gly <210> 312 <211> 209 <212> PRT <213> Homo sapiens <400> 312 Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu 10 Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg 20 25 Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu 35 Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu 55

Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp

Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser

75

90 95

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val \$100\$ 105 110

Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg 115 120 125

Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His Thr 130 135 140

Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val 165 170 175

Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly
180 185 190

His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser 195 200 205

His

<210> 313

<211> 96

<212> PRT

<213> Homo sapiens

<400> 313

Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu

1 5 10 15

Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg 20 25 30

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu 35 40 45

Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu 50 55 60

Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser 65 70 75 80

Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp 85 90 95

<210> 314

<211> 25

<212> PRT

<213> Homo sapiens

<400> 314

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
1 5 10 15

Ile Phe Gly Leu Leu Gly Tyr Tyr Leu 20 25

<210> 315

<211> 88

<212> PRT

<213> Homo sapiens

<400> 315

Cys Ile Thr Lys Cys Asn Arg Leu Gln His Pro Cys Ser Ser Ala Val 1 5 10 15

Tyr Glu Arg Gly Arg His Thr Pro Ser Ile Ile Phe Arg Arg Pro Glu 20 25 30

Glu Ala Ala Leu Ser Pro Leu Pro Pro Ser Val Glu Asp Ala Gly Leu 35 40 45

Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser 50 55 60

Pro Pro Pro Pro Tyr Pro Gly His Thr Lys Gly Phe Arg Val Phe Lys 65 70 75 80

Lys Ser Met Ser Leu Pro Ser His

85

<210> 316

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cattlettgg ttgttettaa acagaettgt atattttgat acagttettt gtaataaaat 1380
                                                                  1432
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<210> 325 <211> 1059 <212> DNA <213> Homo sapiens

<400> 325

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<211> 353

<212> PRT

<213> Homo sapiens

<400> 326

Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu 1 5 10 15

Leu Leu Pro Pro Ala Pro Glu Ala Ala Lys Lys Pro Thr Pro Cys His
20 25 30

Arg Cys Arg Gly Leu Val Asp Lys Phe Asn Gln Gly Met Val Asp Thr 35 40 45

Ala Lys Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Thr 50 55 60

Leu Ser Lys Tyr Glu Ser Ser Glu Ile Arg Leu Leu Glu Ile Leu Glu 65 70 75 80

Gly Leu Cys Glu Ser Ser Asp Phe Glu Cys Asn Gln Met Leu Glu Ala 85 · 90 95

Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr 100 105 110

Pro Asp Leu Phe Glu Trp Phe Cys Val Lys Thr Leu Lys Val Cys Cys 115 120 125

Ser Pro Gly Thr Tyr Gly Pro Asp Cys Leu Ala Cys Gln Gly Gly Ser 130 135 140

Gln Arg Pro Cys Ser Gly Asn Gly His Cys Ser Gly Asp Gly Ser Arg 145 150 155 160

Gln Gly Asp Gly Ser Cys Arg Cys His Met Gly Tyr Gln Gly Pro Leu 165 170 175

Cys Thr Asp Cys Met Asp Gly Tyr Phe Ser Ser Leu Arg Asn Glu Thr 180 185 190

His Ser Ile Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly
195 200 205

Leu Thr Asn Arg Asp Cys Gly Glu Cys Glu Val Gly Trp Val Leu Asp 210 215 Glu Gly Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Pro Pro Pro 225 230 235 240 Cys Ser Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys 245 250 255 Glu Glu Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly 260 265 270 Asn Cys Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys 275 280 285 Ala Asp Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys 290 295 300 Asn Glu Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro 305 310 315 320 Asp Gly Phe Glu Glu Thr Glu Asp Ala Cys Val Pro Pro Ala Glu Ala 325 330 Glu Ala Thr Glu Gly Glu Ser Pro Thr Gln Leu Pro Ser Arg Glu Asp 345 350 Leu <210> 327 <211> 24 <212> PRT

<400> 327

Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu 1 5 10 15

Leu Leu Pro Pro Ala Pro Glu Ala 20

<210> 328 <211> 329 <212> PRT <213> Homo sapiens

<213> Homo sapiens

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 1 10 15
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- Asn Thr Ala Trp Glu Glu Lys Thr Leu Ser Lys Tyr Glu Ser Ser Glu 35 40 45
- Ile Arg Leu Glu Ile Leu Glu Gly Leu Cys Glu Ser Ser Asp Phe 50 55 60
- Glu Cys Asn Gln Met Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp
 65 70 75 80
- Trp Leu Gln Leu Lys Ser Glu Tyr Pro Asp Leu Phe Glu Trp Phe Cys
 85 90 95
- Val Lys Thr Leu Lys Val Cys Cys Ser Pro Gly Thr Tyr Gly Pro Asp 100 105 110
- Cys Leu Ala Cys Gln Gly Gly Ser Gln Arg Pro Cys Ser Gly Asn Gly
 115 120 125
- His Cys Ser Gly Asp Gly Ser Arg Gln Gly Asp Gly Ser Cys Arg Cys 130 135 140
- His Met Gly Tyr Gln Gly Pro Leu Cys Thr Asp Cys Met Asp Gly Tyr 145 150 155 160
- Phe Ser Ser Leu Arg Asn Glu Thr His Ser Ile Cys Thr Ala Cys Asp 165 170 175
- Glu Ser Cys Lys Thr Cys Ser Gly Leu Thr Asn Arg Asp Cys Gly Glu 180 185 190
- Cys Glu Val Gly Trp Val Leu Asp Glu Gly Ala Cys Val Asp Val Asp 195 200 205
- Glu Cys Ala Ala Glu Pro Pro Cys Ser Ala Ala Gln Phe Cys Lys 210 215 220
- Asn Ala Asn Gly Ser Tyr Thr Cys Glu Glu Cys Asp Ser Ser Cys Val 225 230 235 240
- Gly Cys Thr Gly Glu Gly Pro Gly Asn Cys Lys Glu Cys Ile Ser Gly

Tyr Ala Arg Glu His Gly Gln Cys Ala Asp Val Asp Glu Cys Ser Leu 260 265 270

Ala Glu Lys Thr Cys Val Arg Lys Asn Glu Asn Cys Tyr Asn Thr Pro 275 280 285

Gly Ser Tyr Val Cys Val Cys Pro Asp Gly Phe Glu Glu Thr Glu Asp 290 295 300

Ala Cys Val Pro Pro Ala Glu Ala Glu Ala Thr Glu Gly Glu Ser Pro 305 310 315 320

Thr Gln Leu Pro Ser Arg Glu Asp Leu 325

<210> 329

<211> 2730

<212> DNA

<213> Homo sapiens

<400> 329

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<210> 330 <211> 2013 <212> DNA <213> Homo sapiens

<400> 330

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<211> 671

<212> PRT

<213> Homo sapiens

<400> 331

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Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val 35 40 45

Leu Gly Gly Ala Leu Thr Ile Pro Cys His Val His Tyr Leu Arg Pro 50 55 60

Pro Pro Ser Arg Arg Ala Val Leu Gly Ser Pro Arg Val Lys Trp Thr 65 70 75 80

Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val 85 90 95

Arg Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala 100 105 110

Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg 115 120 125

Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ser Gly Ala Gln Glu Ala Cys Ala Arg Ile Gly Ala His Ile Ala Thr Pro Glu Gln Leu Tyr Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser Asp Gln Thr Val Arg Tyr Pro Ile Gln Thr Pro Arg Glu Ala Cys Tyr Gly Asp Met Asp Gly Phe Pro Gly Val Arg Asn Tyr Gly Val Val Asp Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly Glu Leu Phe Leu Gly Asp Pro Pro Glu Lys Leu Thr Leu Glu Glu Ala Arg Ala Tyr Cys Gln Glu Arg Gly Ala Glu Ile Ala Thr Thr Gly Gln Leu Tyr Ala Ala Trp Asp Gly Gly Leu Asp His Cys Ser Pro Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Val Thr Pro Ser Gln Arg Cys Gly Gly Leu Pro Gly Val Lys Thr Leu Phe Leu Phe Pro Asn Gln Thr Gly Phe Pro Asn Lys His Ser Arg Phe Asn Val Tyr Cys Phe Arg Asp Ser Ala Gln Pro Ser Ala Ile Pro Glu Ala Ser Asn Pro Ala Ser Asn Pro Ala Ser Asp Gly Leu Glu Ala Ile Val Thr Val Thr

Glu 385	Thr	Leu	Glu	Glu	Leu 390	Gln	Leu	Pro	Gln	Glu 395	Ala	Thr	Glu	Ser	Glu 400
Ser	Arg	Gly	Ala	Ile 405	Tyr	Ser	Ile	Pro	Ile 410	Met	Glu	Asp	Gly	Gly 415	Gly
Gly	Ser	Ser	Thr 420	Pro	Glu	Asp	Pro	Ala 425	Glu	Ala	Pro	Arg	Thr 430	Leu	Leu
Glu	Phe	Glu 435	Thr	Gln	Ser	Met	Val 440	Pro	Pro	Thr	Gly	Phe 445	Ser	Glu	Glu
Glu	Gly 450	Lys	Ala	Leu	Glu	Glu 455	Glu	Glu	Lys	Tyr	Glu 460	Asp	Glu	Glu	Glu
Lys 465	Glu	Glu	Glu	Glu	Glu 470	Glu	Glu	Glu	Val	Glu 475	Asp	Glu	Ala	Leu	Trp 480
Ala	Trp	Pro	Ser	Glu 485	Leu	Ser	Ser	Pro	Gly 490	Pro	Glu	Ala	Ser	Leu 495	Pro
Thr	Glu	Pro	Ala 500	Ala	Gln	Glu	Lys	Ser 505	Leu	Ser	Gln	Ala	Pro 510	Ala	Arg
Ala	Val	Leu 515	Gln	Pro	Gly	Ala	Ser 520	Pro	Leu	Pro	Asp	Gly 525	Glu	Ser	Glu
Ala	Ser 530	Arg	Pro	Pro	Arg	Val 535	His	Gly	Pro	Pro	Thr 540	Glu	Thr	Leu	Pro
Thr 545	Pro	Arg	Glu	Arg	Asn 550	Leu	Ala	Ser	Pro	Ser 555	Pro	Ser	Thr	Leu	Val 560
Glu	Ala	Arg	Glu	Val 565	Gly	Glu	Ala	Thr	Gly 570	Gly	Pro	Glu	Leu	Ser 575	Gly
Val	Pro	Arg	Gly 580	Glu	Ser	Glu	Glu	Thr 585	Gly	Ser	Ser	Glu	Gly 590	Ala	Pro
Ser	Leu	Leu 595	Pro	Ala	Thr	Arg	Ala 600	Pro	Glu	Gly	Thr	Arg 605	Glu	Leu	Glu
Ala	Pro 610	Ser	Glu	Asp	Asn	Ser 615	Gly	Arg	Thr	Ala	Pro 620	Ala	Gly	Thr	Ser
Val 625	Gln	Ala	Gln	Pro	Val 630	Leu	Pro	Thr	Asp	Ser 635	Ala	Ser	Arg	Gly	Gly 640

Val Ala Val Val Pro Ala Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala 645 650 655

Leu Ser Ile Leu Leu Phe Phe Pro Leu Gln Leu Trp Val Thr 660 665 670

<210> 332

<211> 22

<212> PRT

<213> Homo sapiens

<400> 332

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ala Pro Ala Ala Leu Ala 20

<210> 333

<211> 649

<212> PRT

<213> Homo sapiens

<400> 333

Asp Val Leu Glu Gly Asp Ser Ser Glu Asp Arg Ala Phe Arg Val Arg
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Ile Ala Gly Asp Ala Pro Leu Gln Gly Val Leu Gly Gly Ala Leu Thr
20 25 30

Ile Pro Cys His Val His Tyr Leu Arg Pro Pro Pro Ser Arg Ala
35 40 45

Val Leu Gly Ser Pro Arg Val Lys Trp Thr Phe Leu Ser Arg Gly Arg
50 55 60

Glu Ala Glu Val Leu Val Ala Arg Gly Val Arg Val Lys Val Asn Glu 65 70 75 80

Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr Pro Ala Ser Leu Thr
85 90 . 95

Asp Val Ser Leu Ala Leu Ser Glu Leu Arg Pro Asn Asp Ser Gly Ile 100 105 110

Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp Ser Ser Asp Ala Val

		115					120					125			
Glu	Val 130	Lys	Val	Lys	Gly	Val 135	Val	Phe	Leu	Tyr	Arg 140	Glu	Gly	Ser	Ala
Arg 145	Tyr	Ala	Phe	Ser	Phe 150	Ser	Gly	Ala	Gln	Glu 155	Ala	Cys	Ala	Arg	Ile 160
Gly	Ala	His	Ile	Ala 165	Thr	Pro	Glu	Gln	Leu 170	Tyr	Ala	Ala	Tyr	Leu 175	Gly
Gly	Tyr	Glu	Gln 180	Cys	Asp	Ala	Gly	Trp 185	Leu	Ser	Asp	Gln	Thr 190	Val	Arg
Tyr	Pro	Ile 195	Gln	Thr	Pro	Arg	Glu 200	Ala	Cys	Tyr	Gly	Asp 205	Met	Asp	Gly
Phe	Pro 210	Gly	Val	Arg	Asn	Tyr 215	Gly	Val	Val	Asp	Pro 220	Asp	Asp	Leu	Tyr
Asp 225	Val	Tyr	Cys	Tyr	Ala 230	Glu	Asp	Leu	Asn	Gly 235	Glu	Leu	Phe	Leu	Gly 240
Asp	Pro	Pro	Glu	Lys 245	Leu	Thr	Leu	Glu	Glu 250	Ala	Arg	Ala	Tyr	Cys 255	Gln
Glu	Arg	Gly	Ala 260	Glu	Ile	Ala	Thr	Thr 265	Gly	Gln	Leu	Tyr	Ala 270	Ala	Trp
Asp	Gly	Gly 275	Leu	Asp	His	Cys	Ser 280	Pro	Gly	Trp	Leu	Ala 285	Asp	Gly	Ser
Val	Arg 290	Tyr	Pro	Ile	Val	Thr 295	Pro	Ser	Gln	Arg	Cys 300	Gly	Gly	Gly	Leu
Pro 305	Gly	Val	Lys	Thr	Leu 310	Phe	Leu	Phe	Pro	Asn 315	Gln	Thr	Gly	Phe	Pro 320
Asn	Lys	His	Ser	Arg 325	Phe	Asn	Val	Tyr	Cys 330	Phe	Arg	Asp	Ser	Ala 335	Gln
Pro	Ser	Ala	Ile 340	Pro	Glu	Ala	Ser	Asn 345	Pro	Ala	Ser	Asn	Pro 350	Ala	Ser
Asp	Gly	Leu 355	Glu	Ala	Ile	Val	Thr 360	Val	Thr	Glu	Thr	Leu 365	Glu	Glu	Leu
Gln	Leu	Pro	Gln	Glu	Ala	Thr	Glu	Ser	Glu	Ser	Arg	Gly	Ala	Ile	Tyr

Ser	Ile	Pro	Ile	Met	Glu	Asp	Gly	Gly	Gly	Gly	Ser	Ser	Thr	Pro	G.
205					200	-	-	-	-	205					

Slu

Asp Pro Ala Glu Ala Pro Arg Thr Leu Leu Glu Phe Glu Thr Gln Ser

Met Val Pro Pro Thr Gly Phe Ser Glu Glu Glu Gly Lys Ala Leu Glu

Glu Glu Glu Lys Tyr Glu Asp Glu Glu Glu Lys Glu Glu Glu Glu Glu

Glu Glu Glu Val Glu Asp Glu Ala Leu Trp Ala Trp Pro Ser Glu Leu

Ser Ser Pro Gly Pro Glu Ala Ser Leu Pro Thr Glu Pro Ala Ala Gln

Glu Lys Ser Leu Ser Gln Ala Pro Ala Arg Ala Val Leu Gln Pro Gly

Ala Ser Pro Leu Pro Asp Gly Glu Ser Glu Ala Ser Arg Pro Pro Arg

Val His Gly Pro Pro Thr Glu Thr Leu Pro Thr Pro Arg Glu Arg Asn

Leu Ala Ser Pro Ser Pro Ser Thr Leu Val Glu Ala Arq Glu Val Gly

Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly Val Pro Arg Gly Glu Ser

Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro Ser Leu Leu Pro Ala Thr

Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu Ala Pro Ser Glu Asp Asn

Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser Val Gln Ala Gln Pro Val

Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly Val Ala Val Pro Ala

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Phe Phe Pro Leu Gln Leu Trp Val Thr 645

<210> 334

<211> 456

<212> PRT

<213> Pigeon pea witches'-broom phytoplasma

<400> 334

Met Asn Leu Asp Ile His Cys Glu Gln Leu Ser Asp Ala Arg Trp Thr 1 5 10 15

Glu Leu Leu Pro Leu Leu Gln Gln Tyr Glu Val Val Arg Leu Asp Asp 20 25 30

Cys Gly Leu Thr Glu Glu His Cys Lys Asp Ile Gly Ser Ala Leu Arg
35 40 45

Ala Asn Pro Ser Leu Thr Glu Leu Cys Leu Arg Thr Asn Glu Leu Gly 50 55 60

Asp Ala Gly Val His Leu Val Leu Gln Gly Leu Gln Ser Pro Thr Cys
65 70 75 80

Lys Ile Gln Lys Leu Ser Leu Gln Asn Cys Ser Leu Thr Glu Ala Gly
85 90 95

Cys Gly Val Leu Pro Ser Thr Leu Arg Ser Leu Pro Thr Leu Arg Glu 100 105 110

Leu His Leu Ser Asp Asn Pro Leu Gly Asp Ala Gly Leu Arg Leu Leu 115 120 125

Cys Glu Gly Leu Leu Asp Pro Gln Cys His Leu Glu Lys Leu Gln Leu 130 135 140

Glu Tyr Cys Arg Leu Thr Ala Ala Ser Cys Glu Pro Leu Ala Ser Val 145 150 155 160

Leu Arg Ala Thr Arg Ala Leu Lys Glu Leu Thr Val Ser Asn Asn Asp 165 170 175

Ile Gly Glu Ala Gly Ala Arg Val Leu Gly Gln Gly Leu Ala Asp Ser 180 185 190

Ala	Cys	Gln 195	Leu	Glu	Thr	Leu	Arg 200	Leu	Glu	Asn	Cys	Gly 205	Leu	Thr	Pro
Ala	Asn 210	Cys	Lys	Asp	Leu	Cys 215	Gly	Ile	Val	Ala	Ser 220	Gln	Ala	Ser	Leu
Arg 225	Glu	Leu	Asp	Leu	Gly 230	Ser	Asn	Gly	Leu	Gly 235	Asp	Ala	Gly	Ile	Ala 240
Glu	Leu	Cys	Pro	Gly 245	Leu	Leu	Ser	Pro	Ala 250	Ser	Arg	Leu	Lys	Thr 255	Leu
Trp	Leu	Trp	Glu 260	Cys	Asp	Ile	Thr	Ala 265	Ser	Gly	Cys	Arg	Asp 270	Leu	Cys
Arg	Val	Leu 275	Gln	Ala	Lys	Glu	Thr 280	Leu	Lys	Glu	Leu	Ser 285	Leu	Ala	Gly
Asn	Lys 290	Leu	Gly	Asp	Glu	Gly 295	Ala	Arg	Leu	Leu	Cys 300	Glu	Ser	Leu	Leu
Gln 305	Pro	Gly	Cys	Gln	Leu 310	Glu	Ser	Leu	Trp	Val 315	Lys	Ser	Cys	Ser	Leu 320
Thr	Ala	Ala	Cys	Cys 325	Gln	His	Val	Ser	Leu 330	Met	Leu	Thr	Gln	Asn 335	Lys
His	Leu	Leu	Glu 340	Leu	Gln	Leu	Ser	Ser 345	Asn	Lys	Leu	Gly	Asp 350	Ser	Gly
Ile	Gln	Glu 355	Leu	Cys	Gln	Ala	Leu 360	Ser	Gln	Pro	Gly	Thr 365	Thr	Leu	Arg
Val	Leu 370	Cys	Leu	Gly	Asp	Cys 375	Glu	Val	Thr	Asn	Ser 380	Gly	Cys	Ser	Ser
Leu 385	Ala	Ser	Leu	Leu	Leu 390	Ala	Asn	Arg	Ser	Leu 395	Arg	Glu	Leu	Asp	Leu 400
Ser	Asn	Asn	Cys	Val 405	Gly	Asp	Pro	Gly	Val 410	Leu	Gln	Leu	Leu	Gly 415	Ser
Leu	Glu	Gln	Pro 420	Gly	Cys	Ala	Leu	Glu 425	Gln	Leu	Val	Leu	Tyr 430	Asp	Thr
Tyr	Trp	Thr 435	Glu	Glu	Val	Glu	Asp	Arg	Leu	Gln	Ala	Leu 445	Glu	Gly	Ser

Lys Pro Gly Leu Arg Val Ile Ser 450 455

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<211> 834

<212> PRT

<213> Mus sp.

<400> 335

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Val Ser Ser Gly Glu Leu Val Thr Val Val Arg Arg Phe Ser Gln Thr 35 40 45

Gly Ile Gln Asp Phe Leu Thr Leu Thr Leu Thr Glu His Ser Gly Leu 50 55 60

Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Val Glu Ala 65 70 75 80

Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Ala Glu Lys Lys
85 90 95

Ile Glu Cys Thr Gln Lys Gly Lys Ser Asn Gln Thr Glu Cys Phe Asn
100 105 110

Phe Ile Arg Phe Leu Gln Pro Tyr Asn Ser Ser His Leu Tyr Val Cys 115 120 125

Gly Thr Tyr Ala Phe Gln Pro Lys Cys Thr Tyr Ile Asn Met Leu Thr 130 135 140

Phe Thr Leu Asp Arg Ala Glu Phe Glu Asp Gly Lys Gly Lys Cys Pro 145 150 155 160

Tyr Asp Pro Ala Lys Gly His Thr Gly Leu Leu Val Asp Gly Glu Leu 165 170 175

Tyr Ser Ala Thr Leu Asn Asn Phe Leu Gly Thr Glu Pro Val Ile Leu 180 185 190

Arg Tyr Met Gly Thr His His Ser Ile Lys Thr Glu Tyr Leu Ala Phe 195 200 205

Trp Leu Asn Glu Pro His Phe Val Gly Ser Ala Phe Val Pro Glu Ser Val Gly Ser Phe Thr Gly Asp Asp Lys Ile Tyr Phe Phe Ser Glu Arg Ala Val Glu Tyr Asp Cys Tyr Ser Glu Gln Val Val Ala Arg Val Ala Arg Val Cys Lys Gly Asp Met Gly Gly Ala Arg Thr Leu Gln Lys Lys Trp Thr Thr Phe Leu Lys Ala Arg Leu Val Cys Ser Ala Pro Asp Trp Lys Val Tyr Phe Asn Gln Leu Lys Ala Val His Thr Leu Arg Gly Ala Ser Trp His Asn Thr Thr Phe Phe Gly Val Phe Gln Ala Arg Trp Gly Asp Met Asp Leu Ser Ala Val Cys Glu Tyr Gln Leu Glu Gln Ile Gln Gln Val Phe Glu Gly Pro Tyr Lys Glu Tyr Ser Glu Gln Ala Gln Lys Trp Ala Arg Tyr Thr Asp Pro Val Pro Ser Pro Arg Pro Gly Ser Cys Ile Asn Asn Trp His Arg Asp Asn Gly Tyr Thr Ser Ser Leu Glu Leu Pro Asp Asn Thr Leu Asn Phe Ile Lys Lys His Pro Leu Met Glu Asp Gln Val Lys Pro Arg Leu Gly Arg Pro Leu Leu Val Lys Lys Asn Thr Asn Phe Thr His Val Val Ala Asp Arg Val Pro Gly Leu Asp Gly Ala Thr Tyr Thr Val Leu Phe Ile Gly Thr Gly Asp Gly Trp Leu Leu Lys Ala Val Ser Leu Gly Pro Trp Ile His Met Val Glu Glu Leu

Gln 465	Val	Phe	Asp	Gln	Glu 470	Pro	Val	Glu	Ser	Leu 475	Val	Leu	Ser	Gln	Ser 480
Lys	Lys	Val	Leu	Phe 485	Ala	Gly	Ser	Arg	Ser 490	Gln	Leu	Val	Gln	Leu 495	Ser
Leu	Ala	Asp	Cys 500	Thr	Lys	Tyr	Arg	Phe 505	Cys	Val	Asp	Cys	Val 510	Leu	Ala
Arg	Asp	Pro 515	Tyr	Cys	Ala	Trp	Asn 520	Val	Asn	Thr	Ser	Arg 525	Cys	Val	Ala
Thr	Thr 530	Ser	Gly	Arg	Ser	Gly 535	Ser	Phe	Leu	Val	Gln 540	His	Val	Ala	Asn
Leu 545	Asp	Thr	Ser	Lys	Met 550	Cys	Asn	Gln	Tyr	Gly 555	Ile	Lys	Lys	Val	Arg 560
Ser	Ile	Pro	Lys	Asn 565	Ile	Thr	Val	Val	Ser 570	Gly	Thr	Asp	Leu	Val 575	Leu
Pro	Cys	His	Leu 580	Ser	Ser	Asn	Leu	Ala 585	His	Ala	His	Trp	Thr 590	Phe	Gly
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Pro 625	Tyr	Arg	Cys	Tyr	Ser 630	Glu	Glu	Gln	Gly	Thr 635	Arg	Leu	Ala	Ala	Glu 640
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Leu	Gly	Ala 675	Val	Cys	Leu	Val	Leu 680	Leu	Leu	Leu	Val	Leu 685	Ser	Leu	Arg
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Thr 705	Leu	Val	Tyr	Pro	Leu 710	Glu	Leu	Pro	Lys	Glu 715	Pro	Ala	Ser	Pro	Pro 720

Phe Arg Pro Gly Pro Glu Thr Asp Glu Lys Leu Trp Asp Pro Val Gly 725 730 735 Tyr Tyr Tyr Ser Asp Gly Ser Leu Lys Ile Val Pro Gly His Ala Arg 740 745 750 Cys Gln Pro Gly Gly Gly Pro Pro Ser Pro Pro Pro Gly Ile Pro Gly 755 760 765 Gln Pro Leu Pro Ser Pro Thr Arg Leu His Leu Gly Gly Gly Arg Asn 770 775 780 Ser Asn Ala Asn Gly Tyr Val Arg Leu Gln Leu Gly Gly Glu Asp Arg 785 790 795 Gly Gly Ser Gly His Pro Leu Pro Glu Leu Ala Asp Glu Leu Arg Arg 8.05 810 Lys Leu Gln Gln Arg Gln Pro Leu Pro Asp Ser Asn Pro Glu Glu Ser 820 825 830 Ser Val <210> 336 <211> 3503 <212> DNA <213> Mus sp. <400> 336 ggcacgaggt ggccggagtc aaacgcgagg gcagcgccag ggattggagc tgcacgaaag 60 agggctgctg gactgaagtt tagaccctgg qtqtctqcca tqqccccaca ctqqqctqtc 120 tggctgctgg cagcagggct gtggggcctg ggcatcgggg ctgagatgtg gtggaacctt 180 gtgccccgga agacagtatc ttctggggag ctggtcacag tagtgaggcg gttctcccag 240 acaggcatcc aggacttcct gacactgacc ctgacagaac attctggcct tttatatgtg 300 ggggcccgag aggcgctgtt tgccttcagt gtagaggctc tggagctgca aggagcgatc 360 tettgggagg etceagetga gaagaaaatt gaatgtaeee agaaagggaa gageaaceag 420 accgaatgct tcaacttcat ccgcttcctt cagccataca attcctccca tctgtatgtc 480 tgeggcacet atgeetteea geceaagtge acetacatea acatgeteac gtteacettg 540 gaccgtgcag aatttgagga tgggaagggt aaatgcccat atgacccagc taagqgtcac 600 accggactcc ttgtggacgg tgagctgtac tcaqccacac tcaataactt cctqqqcaca 660 gageeggtta teettegata catggggaee caccaeteea teaagaeaga gtaeetgget 720 ttttggctga atgaacccca ctttgtaggc tctgcctttg tccctgagag tgtgggaagc 780

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<213> Cricetulus griseus

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Arg Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Ser Leu 50 55 60

Ser Lys Tyr Glu Phe Ser Glu Ile Arg Leu Leu Glu Ile Met Glu Gly 65 70 75 80

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Pro Gly Thr Tyr Gly Pro Asp Cys Gln Glu Cys Gln Gly Gly Ser Gln 130 135 140

Arg Pro Cys Ser Gly Asn Gly His Cys Asp Gly Asp Gly Ser Arg Gln 145 150 155 160

Gly Asp Gly Ser Cys Gln Cys His Val Gly Tyr Lys Gly Pro Leu Cys 165 170 175

Ile Asp Cys Met Asp Gly Tyr Phe Ser Leu Leu Arg Asn Glu Thr His 180 185 190

195 200 205 Thr Asn Lys Gly Cys Val Glu Cys Glu Val Gly Trp Thr Arg Val Glu 210 215 220 Asp Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Thr Pro Pro Cys 225 230 235 240 Ser Asn Val Gln Tyr Cys Glu Asn Val Asn Gly Ser Tyr Thr Cys Glu 245 250 Glu Cys Asp Ser Thr Cys Val Gly Cys Thr Gly Lys Gly Pro Ala Asn 265 270 Cys Lys Glu Cys Ile Ser Gly Tyr Ser Lys Gln Lys Gly Glu Cys Ala 275 280 285 Asp Ile Asp Glu Cys Ser Leu Glu Thr Lys Val Cys Lys Lys Glu Asn 295 300 Glu Asn Cys Tyr Asn Thr Pro Gly Ser Phe Val Cys Val Cys Pro Glu 305 310 315 320 Gly Phe Glu Glu Asp Arg Arg Cys Leu Cys Thr Asp Ser Arg Arg 325 330 335 Ser Gly Arg Gly Lys Ser His Thr Ala Thr Leu Pro 340 345 <210> 340 <211> 1399 <212> DNA <213> Cricetulus griseus <400> 340 gtagccgggg gaacggccgg cgcgcttgcc ggtgggcgga ggcgagactc cacaqcaqtt 60 ctctgccggt cgcccgcgag tgcacccgcc atgcacctgc cgcccgctgc cgcagtcggg 120 ctgctactgc tgctgctgcc gcctcccgcg cgcgtggcct cccggaagcc gacaatgtgc 180 cagaggtgcc gggcgctggt ggacaagttc aaccagggga tggccaacac ggccaggaag 240 aatttcggcg gcggcaacac ggcgtgggag gagaaqaqtc tqtccaaqta cqaattcagt 300 gagattcggc tcctggagat tatggagggc ctgtgtgaca gcaacgactt tgaatgcaac 360 caactettgg aacageatga ggageageta gaggeetggt ggeagaeact gaagaaggag 420 tgccctaacc tatttgagtg gttctgtgta cacacactga aagcatgctg tcttccaggc 480

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Pro Pro Ser Arg Arg Ala Val Leu Gly Ser Pro Arg Val Lys Trp Thr 65 70 75 80

Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val 85 90 95

Arg Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala 100 105 110

Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg 115 120 125

Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp 130 135 140

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His	Cys	Ser	Pro	Gly 245	Trp	Leu	Ala	Asp	Gly 250	Ser	Val	Arg	Tyr	Pro 255	Ile
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Phe	Asn 290	Val	Tyr	Cys	Phe	Arg 295	Asp	Ser	Ala	Gln	Leu 300	Leu	Pro	Ser	Leu
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Gly Gly Ala Leu Ala Ile Pro Cys His Val His His Leu Arg Pro Pro 50 55 60

Arg Ser Arg Arg Ala Ala Pro Gly Phe Pro Arg Val Lys Trp Thr Phe

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- Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr 100 105 110
- Pro Ala Ser Leu Thr Asp Val Ser Leu Val Leu Ser Glu Leu Arg Pro 115 120 125
- Asn Asp Ser Gly Val Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp 130 135 140
- Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr 145 150 155 160
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- Ala Cys Ala Arg Ile Gly Ala Arg Ile Ala Thr Pro Glu Gln Leu Tyr 180 185 190
- Ala Ala Tyr Leu Glý Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser 195 200 205
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- Gly Asp Met Asp Gly Tyr Pro Gly Val Arg Asn Tyr Gly Val Val Gly
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- Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly 245 250 255
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330

335

495

325

485

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Pro Thr Gly Ser Glu Thr Glu His Ser Leu Ser Gln Val Ser Pro Pro

490

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Ser Ala Thr Ser Thr Pro Gly Gly Ala Arg Glu Val Gly Gly Glu Thr 530 540

Gly Ser Pro Glu Leu Ser Gly Val Pro Arg Glu Ser Glu Glu Ala Gly 545 550 555 560

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Pro Val Gly Pro Arg Glu Leu Glu Thr Pro Ser Glu Glu Lys Ser Gly

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gcaagcatct ttatgcaccg tcgcctccta tacaatagat ttgatttaga actcttcact 180
cccqqqaacc tqqaqaqaq qtqctatqaq qaqttctqta qttatqaaqa aqccaqaqaq 240
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accacaagat cagatgtcaa caaagagaaa attgatgtta tgggccttct gactggctta 360
attgcggctg gagtattctt ggttgttttt ggcttacttg gttactatct gtgtatcacc 420
aagtgtaata ggcagccata tcaaggttct tcagctgtct acacaagaag gaccaggcac 480
acaccqtcca tcattttcaq aacccatqaq qaaqctqtct tqtctccatc qtcatcctca 540
gaggacgcgg gactaccttc ctatgaacag gcagtagctc tgaccagaaa acacagtgtc 600
tcaccaccac ctccatatcc tgggccagca aaaggattta gggtatttaa aaagtcaatg 660
                                                                675
tcactcccat ctcac
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<212> PRT
<213> Gerbil
<400> 353
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 1
                 5
                                    10
                                                       15
Ala Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu
            20
                                25
                                                   30
Gly Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg
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40

45

35

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val Val Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser His <210> 354 <211> 17 <212> PRT <213> Gerbil <400> 354 Met Phe Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu

Ala

<210> 355 <211> 208 <212> PRT <213> Gerbil <400> 355 Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val Val Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly Pro

Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser His

65

<210> 356 <211> 95 <212> PRT <213> Gerbil <400> 356

Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly 10

Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu 25

Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu 40 45

Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile 55

Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val 70

Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp 85

<210> 357

<211> 25

<212> PRT

<213> Gerbil

<400> 357

Val Met Gly Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val 10

Val Phe Gly Leu Leu Gly Tyr Tyr Leu 20

<210> 358

<211> 88

<212> PRT

<213> Gerbil

<400> 358

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Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala Val
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                  5
Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His
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                                  25
                                                      30
Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Ser Glu Asp Ala Gly Leu
         35
                              40
                                                  45
Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser
     50
                         55
                                              60
Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe Lys
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                     70
                                          75
Lys Ser Met Ser Leu Pro Ser His
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aagaacaggc tctacctgca caacaacccg ctgccctgtg actgcagcct ctaccacctg 180
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caggtgggcc agtccctgag gctcttctgc aacaccagtg tgcctgccac tcgggtggcc 420
tgggtctccc cgaagaatga gctgcttgtg gcgccagcct ctcaggatgg tagcatcgct 480
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<210> 363

<211> 320

<212> PRT

<213> Mus sp.

<400> 363

Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
1 5 10 15

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu 20 25 30

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn 35 40 45

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp 50 55 60

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
65 70 75 80

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
85 90 95

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu 100 105 110

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu 115 120 125

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro 130 135 140

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala 145 150 155 160

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn 180 185 190

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro 195 200 205

Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly 210 215 220

Leu Val Leu Val Leu Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys 225 230 235 240

Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala 245 250 255

Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr 260 265 270

Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val 275 280 285

Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu 290 295 300

Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu 305 310 315 320

<210> 364

<211> 16

<212> PRT

<213> Mus sp.

<400> 364

Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
1 5 10 15

<210> 365

<211> 304

<212> PRT

<213> Mus sp.

- 4	\sim	Λ.	2	-
< 4	w	0>	- 31	n:

- Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
 1 5 10 15
- Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn 20 25 30
- Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp 35 40 45
- His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr 50 55 60
- Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His 65 70 75 80
- Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu 85 90 95
- Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu
 100 105 110
- Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro 115 120 125
- Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala 130 135 140
- Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His 145 150 155 160
- Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn 165 170 175
- Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro 180 185 190
- Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly
 195 200 205
- Leu Val Leu Val Leu Eur Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys 210 215 220
- Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala 225 230 235 240
- Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr 245 250 255

Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val 260 265 270

Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu 275 280 285

Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu 290 295 300

<210> 366

<211> 197

<212> PRT

<213> Mus sp.

<400> 366

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn 20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp 35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr 50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His 65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu 85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu
100 105 110

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro 115 120 125

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala 130 135 140

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His

145 150 155 160

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn 165 170 175

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro 180 185 190

Glu Thr Phe Asn Thr 195

<210> 367

<211> 20

<212> PRT

<213> Mus sp.

<400> 367

Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly Leu Val Leu Val Leu 1 5 10 15

Leu Tyr Leu Phe

20

<210> 368

<211> 87

<212> PRT

<213> Mus sp.

<400> 368

Ala Pro Pro Cys Arg Gly Cys Cys His Cys Cys Gln Arg Ala Cys Arg
1 5 10 15

Asn Arg Cys Trp Pro Arg Ala Ser Ser Pro Leu Gln Glu Leu Ser Ala 20 25 30

Gln Ser Ser Met Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys 35 40 45

Ala Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Lys Lys Gly 50 55 60

Leu Asn Gly Arg Val Gln Leu Ala Val Pro Pro Asp Ser Asp Leu Cys 65 70 75 80

Asn Pro Met Gly Leu Gln Leu

85

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<211> 24
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<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: PCR Primer
<400> 369
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<213> Homo sapiens
<400> 371
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gcactacaag gcgggaagcc atgtctgttt tggaacgaga ctttccagca tccatacaac 240
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gatggagacg tgagcccctg gtgctatgtg gcagagcacg aggatggtgt ctactggaag 360
tactgtgaga tacctgcttg ccagatgcct ggaaaccttg gctgctacaa ggatcatgga 420
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ttctgtggaa acaatcctga ttactggaag tacggggagg cagccagtac cgaatgcaac 600
agggtctgct tcggggatca cacccaaccc tgtggtggcg atggcaggat catcctcttt 660
gatacteteg tgggcgcetg cggtgggaac tactcageca tgtettetgt ggtetattee 720
cctgacttcc ccgacaccta tgccacgggg agggtctgct actggaccat ccgggttccg 780
ggggcctccc acatccactt cagcttcccc ctatttgaca tcagggactc ggcggacatg 840
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ccacctctgt ccttcaacgt ctctctggac ttcgtcatct tgtatttctt ctctgatcgc 960
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<210> 372 <211> 1425 <212> DNA <213> Homo sapiens

<400> 372

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<210> 373 <211> 475

<212> PRT

<213> Homo sapiens

<400> 373

Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu 1 5 10 15

Thr Leu Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro 20 25 30

Glu Cys Phe Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp 35 40 45

Thr Ala Leu Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe 50 55 60

Gln His Pro Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu 65 70 75 80

Gly Glu His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp 85 90 95

Cys Tyr Val Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu 100 105 110

Ile Pro Ala Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His 115 120 125

Gly Asn Pro Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu 130 135 140

Thr Ile Gln Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe 145 150 155 160

Ala Gly Met Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp 165 170 175

Tyr Trp Lys Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys 180 185 190

Phe Gly Asp His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu 195 200 205

Phe Asp Thr Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser 210 215 220

Ser Val Val Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg 225 230 235 240

Val Cys Tyr Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe Ser Phe Pro Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser Arg Pro Pro Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr Phe Phe Ser Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr Gln Ala Val Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln Thr Val Ala Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala Arg Ser Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His Pro Pro Gln Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly Ala Gly Ser His Arg Val Glu Gly Trp Thr Val Tyr Gly Leu Ala Thr Leu Leu Ile Leu Thr Val Thr Ala Ile Val Ala Lys Ile Leu Leu His Val Thr Phe Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg Asp Cys His Gln Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys Pro Ser Thr Ser Ile Ser Ile Phe Lys Lys Leu Lys Gly Gln Ser Gln Gln Asp Asp Arg Asn Pro Leu Val Ser Asp

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<211> 19
<212> PRT
<213> Homo sapiens
<400> 374
Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu
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Thr Leu Ala
<210> 375
<211> 456
<212> PRT
<213> Homo sapiens
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<400> 375

Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe 5 10

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Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu 20 25

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro 35 40

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Leu Gly Glu His 55

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val 70 75

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala 90

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro 105

Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln 115 120 125

Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met 130 135

Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys 145 150 155 160

Tyr	Gly	Glu	Ala	Ala 165	Ser	Thr	Glu	Cys	Asn 170	Ser	Val	Суѕ	Phe	Gly 175	Asp
His	Thr	Gln	Pro 180	Cys	Gly	Gly	Asp	Gly 185	Arg	Ile	Ile	Leu	Phe 190	Asp	Thr
Leu	Val	Gly 195	Ala	Cys	Gly	Gly	Asn 200	Tyr	Ser	Ala	Met	Ser 205	Ser	Val	Val
Tyr	Ser 210	Pro	Asp	Phe	Pro	Asp 215	Thr	Tyr	Ala	Thr	Gly 220	Arg	Val	Cys	Tyr
Trp 225	Thr	Ile	Arg	Val	Pro 230	Gly	Ala	Ser	His	Ile 235	His	Phe	Ser	Phe	Pro 240
Leu	Phe	Asp	Ile	Arg 245	Asp	Ser	Ala	Asp	Met 250	Val	Glu	Leu	Leu	Asp 255	Gly
Tyr	Thr	His	Arg 260	Val	Leu	Ala	Arg	Phe 265	His	Gly	Arg	Ser	Arg 270	Pro	Pro
Leu	Ser	Phe 275	Asn	Val	Ser	Leu	Asp 280	Phe	Val	Ile	Leu	Tyr 285	Phe	Phe	Ser
Asp	Arg 290	Ile	Asn	Gln	Ala	Gln 295	Gly	Phe	Ala	Val	Leu 300	Tyr	Gln	Ala	Val
Lys 305	Glu	Glu	Leu	Pro	Gln 310	Glu	Arg	Pro	Ala	Val 315	Asn	Gln	Thr	Val	Ala 320
Glu	Val	Ile	Thr	Glu 325	Gln	Ala	Asn	Leu	Ser 330	Val	Ser	Ala	Ala	Arg 335	Ser
Ser	Lys	Val	Leu 340	Tyr	Val	Ile	Thr	Thr 345	Ser	Pro	Ser	His	Pro 350	Pro	Gln
Thr	Val	Pro 355	Gly	Ser	Asn	Ser	Trp 360	Ala	Pro	Pro	Met	Gly 365	Ala	Gly	Ser
His	Arg 370	Val	Glu	Gly	Trp	Thr 375	Val	Tyr	Gly	Leu	Ala 380	Thr	Leu	Leu	Ile
Leu 385	Thr	Val	Thr	Ala	Ile 390	Val	Ala	Lys	Ile	Leu 395	Leu	His	Val	Thr	Phe 400
Lys	Ser	His	Arg	Val 405	Pro	Ala	Ser	Gly	Asp 410	Leu	Arg	Asp	Cys	His 415	Gln

Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys Pro Ser Thr 420 425 430

Ser Ile Ser Ile Phe Lys Lys Leu Lys Gly Gln Ser Gln Gln Asp 435 440 445

Asp Arg Asn Pro Leu Val Ser Asp 450 455

<210> 376

<211> 373

<212> PRT

<213> Homo sapiens

<400> 376

Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe
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Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu 20 25 30

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro 35 40 45

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His 50 55 60

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val 65 70 75 80

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala 85 90 95

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro 100 105 110

Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln
115 120 125

Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met 130 135 140

Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys 145 150 155 160

Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp 165 170 175

205

Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg Val Cys Tyr 210 215 220

200

Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe Ser Phe Pro 225 230 235 240

Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly 245 250 255

Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser Arg Pro Pro 260 265 270

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Pro Trp Gly Gln Ser Asp Cys Gly His Lys Glu Asp Ala Gly Val Arg 1330 1335 1340

Cys Ser Gly Gln Ser Leu Lys Ser Leu Asn Ala Ser Ser Gly His Leu 1345 1350 1355 1360

Ala Leu Ile Leu Ser Ser Ile Phe Gly Leu Leu Leu Leu Val Leu Phe 1365 1370 1375

Ile Leu Phe Leu Thr Trp Cys Arg Val Gln Lys Gln Lys His Leu Pro 1380 1385 1390

Leu Arg Val Ser Thr Arg Arg Gly Ser Leu Glu Glu Asn Leu Phe 1395 1400 1405

His Glu Met Glu Thr Cys Leu Lys Arg Glu Asp Pro His Gly Thr Arg 1410 1415 1420

Thr Ser Asp Asp Thr Pro Asn His Gly Cys Glu Asp Ala Ser Asp Thr 1425 1430 1435 1440

Ser Leu Leu Gly Val Leu Pro Ala Ser Glu Ala Thr Lys 1445 1450

<210> 382

<211> 40

<212> PRT

<213> Homo sapiens

<400> 382

Met Met Leu Pro Gln Asn Ser Trp His Ile Asp Phe Gly Arg Cys Cys 1 5 10 15

Cys His Gln Asn Leu Phe Ser Ala Val Val Thr Cys Ile Leu Leu 20 25 30

Asn Ser Cys Phe Leu Ile Ser Ser 35 40

<210> 383

<211> 1413

<212> PRT

<213> Homo sapiens

<400> 383

Phe Asn Gly Thr Asp Leu Glu Leu Arg Leu Val Asn Gly Asp Gly Pro
1 5 10 15

Cys Ser Gly Thr Val Glu Val Lys Phe Gln Gly Gln Trp Gly Thr Val
20 25 30

Cys Asp Asp Gly Trp Asn Thr Thr Ala Ser Thr Val Val Cys Lys Gln
35 40 45

Leu Gly Cys Pro Phe Ser Phe Ala Met Phe Arg Phe Gly Gln Ala Val 50 55 60

Thr Arg His Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Tyr Gly Asn 65 70 75 80

Glu Ser Ala Leu Trp Glu Cys Gln His Arg Glu Trp Gly Ser His Asn 85 90 95

Cys Tyr His Gly Glu Asp Val Gly Val Asn Cys Tyr Gly Glu Ala Asn 100 105 110

Leu Gly Leu Arg Leu Val Asp Gly Asn Asn Ser Cys Ser Gly Arg Val 115 120 125

Glu Val Lys Phe Gln Glu Arg Trp Gly Thr Ile Cys Asp Asp Gly Trp 130 135 140

Asn Leu Asn Thr Ala Ala Val Val Cys Arg Gln Leu Gly Cys Pro Ser 145 150 155 160

Ser Phe Ile Ser Ser Gly Val Val Asn Ser Pro Ala Val Leu Arg Pro 165 170 175

Ile Trp Leu Asp Asp Ile Leu Cys Gln Gly Asn Glu Leu Ala Leu Trp

180	185	190

Asn	Cys	Arg 195	His	Arg	Gly	Trp	Gly 200	Asn	His	Asp	Cys	Ser 205	His	Asn	Glu
Asp	Val 210	Thr	Leu	Thr	Cys	Tyr 215	Asp	Ser	Ser	Asp	Leu 220	Glu	Leu	Arg	Leu
Val 225	Gly	Gly	Thr	Asn	Arg 230	Cys	Met	Gly	Arg	Val 235	Glu	Leu	Lys	Ile	Gln 240
Gly	Arg	Trp	Gly	Thr 245	Val	Cys	His	His	Lys 250	Trp	Asn	Asn	Ala	Ala 255	Ala
Asp	Val	Val	Cys 260	Lys	Gln	Leu	Gly	Cys 265	Gly	Thr	Ala	Leu	His 270	Phe	Ala
Gly	Leu	Pro 275	His	Leu	Gln	Ser	Gly 280	Ser	Asp	Val	Val	Trp 285	Leu	Asp	Gly
Val	Ser 290	Cys	Ser	Gly	Asn	Glu 295	Ser	Phe	Leu	Trp	Asp 300	Cys	Arg	His	Ser
Gly 305	Thr	Val	Asn	Phe	Asp 310	Cys	Leu	His	Gln	Asn 315	Asp	Val	Ser	Val	Ile 320
Cys	Ser	Asp	Gly	Ala 325	Asp	Leu	Glu	Leu	Arg 330	Leu	Ala	Asp	Gly	Ser 335	Asn
Asn	Cys	Ser	Gly 340	Arg	Val	Glu	Val	Arg 345	Ile	His	Glu	Gln	Trp 350	Trp	Thr
Ile	Cys	Asp 355	Gln	Asn	Trp	Lys	Asn 360	Glu	Gln	Ala	Leu	Val 365	Val	Cys	Lys
Gln	Leu 370	Gly	Cys	Pro	Phe	Ser 375	Val	Phe	Gly	Ser	Arg 380	Arg	Ala	Lys	Pro
Ser 385	Asn	Glu	Ala	Arg	Asp 390	Ile	Trp	Ile	Asn	Ser 395	Ile	Ser	Cys	Thr	Gly 400
Asn	Glu	Ser	Ala	Leu 405	Trp	Asp	Cys	Thr	Tyr 410	Asp	Gly	Lys	Ala	Lys 415	Arg
Thr	Cys	Phe	Arg 420	Arg	Ser	Asp	Ala	Gly 425	Val	Ile	Cys	Ser	Asp 430	Lys	Ala
Asp	Leu	Asp	Leu	Arg	Leu	Val	Gly	Ala	His	Ser	Pro	Cys	Tyr	Gly	Arg

Leu	Glu 450	Val	Lys	Tyr	Gln	Gly 455	Glu	Trp	Gly	Thr	Val 460	Cys	His	Asp	Arg
Trp 465	Ser	Thr	Arg	Asn	Ala 470	Ala	Val	Val	Cys	Lys 475	Gln	Leu	Gly	Cys	Gly 480
Lys	Pro	Met	His	Val 485	Phe	Gly	Met	Thr	Tyr 490	Phe	Lys	Glu	Ala	Ser 495	Gly
Pro	Ile	Trp	Leu 500	Asp	Asp	Val	Ser	Cys 505	Ile	Gly	Asn	Glu	Ser 510	Asn	Ile
Trp	Asp	Cys 515	Glu	His	Ser	Gly	Trp 520	Gly	Lys	His	Asn	Cys 525	Val	His	Arg
Glu	Asp 530	Val	Ile	Val	Thr	Cys 535	Ser	Gly	Āsp	Ala	Thr 540	Trp	Gly	Leu	Arg
Leu 545	Val	Gly	Gly	Ser	Asn 550	Arg	Cys	Ser	Gly	Arg 555	Leu	Glu	Val	Tyr	Phe 560
Gln	Gly	Arg	Trp	Gly 565	Thr	Val	Cys	Asp	Asp 570	Gly	Trp	Asn	Ser	Lys 575	Ala
Ala	Ala	Val	Val 580	Cys	Ser	Gln	Leu	Asp 585	Cys	Pro	Ser	Ser	Ile 590	Ile	Gly
Met	Gly	Leu 595	Gly	Asn	Ala	Ser	Thr 600	Gly	Tyr	Gly	Lys	Ile 605	Trp	Leu	Asp
Asp	Val 610	Ser	Cys	Asp	Gly	Asp 615	Glu	Ser	Asp	Leu	Trp 620	Ser	Cys	Arg	Asn
Ser 625	Gly	Trp	Gly	Asn	Asn 630	Asp	Cys	Ser	His	Ser 635	Glu	Asp	Val	Gly	Val 640
Ile	Cys	Ser	Asp	Ala 645	Ser	Asp	Met	Glu	Leu 650	Arg	Leu	Val	Gly	Gly 655	Ser
Ser	Arg	Cys	Ala 660	Gly	Lys	Val	Glu	Val 665	Asn	Val	Gln	Gly	Ala 670	Val	Gly
Ile	Leu	Cys 675	Ala	Asn	Gly	Trp	Gly 680	Met	Asn	Ile	Ala	Glu 685	Val	Val	Cys
Arg	Gln	Leu	Glu	Cys	Gly	Ser	Ala	Ile	Arg	Val	Ser	Arg	Glu	Pro	His

Phe	Thr	Glu	Arg	Thr	Leu	His	Ile	Leu	Met	Ser	Asn	Ser	Gly	Cys	Thr
705					710					715					720

- Gly Gly Glu Ala Ser Leu Trp Asp Cys Ile Arg Trp Glu Trp Lys Gln
- Thr Ala Cys His Leu Asn Met Glu Ala Ser Leu Ile Cys Ser Ala His
- Arg Gln Pro Arg Leu Val Gly Ala Asp Met Pro Cys Ser Gly Arg Val
- Glu Val Lys His Ala Asp Thr Trp Arg Ser Val Cys Asp Ser Asp Phe
- Ser Leu His Ala Ala Asn Val Leu Cys Arg Glu Leu Asn Cys Gly Asp
- Ala Ile Ser Leu Ser Val Gly Asp His Phe Gly Lys Gly Asn Gly Leu
- Thr Trp Ala Glu Lys Phe Gln Cys Glu Gly Ser Glu Thr His Leu Ala
- Leu Cys Pro Ile Val Gln His Pro Glu Asp Thr Cys Ile His Ser Arg
- Glu Val Gly Val Val Cys Ser Arg Tyr Thr Asp Val Arg Leu Val Asn
- Gly Lys Ser Gln Cys Asp Gly Gln Val Glu Ile Asn Val Leu Gly His
- Trp Gly Ser Leu Cys Asp Thr His Trp Asp Pro Glu Asp Ala Arg Val
- Leu Cys Arg Gln Leu Ser Cys Gly Thr Ala Leu Ser Thr Thr Gly Gly
- Lys Tyr Ile Gly Glu Arg Ser Val Arg Val Trp Gly His Arg Phe His
- Cys Leu Gly Asn Glu Ser Leu Leu Asp Asn Cys Gln Met Thr Val Leu
- Gly Ala Pro Pro Cys Ile His Gly Asn Thr Val Ser Val Ile Cys Thr

945	950	955	960

- Gly Ser Leu Thr Gln Pro Leu Phe Pro Cys Leu Ala Asn Val Ser Asp 965 970 . 975
- Pro Tyr Leu Ser Ala Val Pro Glu Gly Ser Ala Leu Ile Cys Leu Glu 980 985 990
- Asp Lys Arg Leu Arg Leu Val Asp Gly Asp Ser Arg Cys Ala Gly Arg 995 1000 1005
- Val Glu Ile Tyr His Asp Gly Phe Trp Gly Thr Ile Cys Asp Asp Gly 1010 1015 1020
- Trp Asp Leu Ser Asp Ala His Val Val Cys Gln Lys Leu Gly Cys Gly 1025 1030 1035 1040
- Val Ala Phe Asn Ala Thr Val Ser Ala His Phe Gly Glu Gly Ser Gly 1045 1050 1055
- Pro Ile Trp Leu Asp Asp Leu Asn Cys Thr Gly Thr Glu Ser His Leu
 1060 1065 1070
- Trp Gln Cys Pro Ser Arg Gly Trp Gly Gln His Asp Cys Arg His Lys
 1075 1080 1085
- Glu Asp Ala Gly Val Ile Cys Ser Glu Phe Thr Ala Leu Arg Leu Tyr 1090 1095 1100
- Ser Glu Thr Glu Thr Glu Ser Cys Ala Gly Arg Leu Glu Val Phe Tyr 1105 1110 1115 1120
- Asn Gly Thr Trp Gly Ser Val Gly Arg Arg Asn Ile Thr Thr Ala Ile 1125 1130 1135
- Ala Gly Ile Val Cys Arg Gln Leu Gly Cys Gly Glu Asn Gly Val Val 1140 1145 1150
- Ser Leu Ala Pro Leu Ser Lys Thr Gly Ser Gly Phe Met Trp Val Asp 1155 1160 1165
- Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser 1170 1175 1180
- Ala Pro Trp Glu Arg Arg Ile Ser Ser Pro Ala Glu Glu Thr Trp Ile 1185 1190 1195 1200
- Thr Cys Glu Asp Arg Ile Arg Val Arg Gly Gly Asp Thr Glu Cys Ser

Gly Arg Val Glu Ile Trp His Ala Gly Ser Trp Gly Thr Val Cys Asp 1220 1230

Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly 1235 1240 1245

Cys Gly Ser Ala Leu Ala Ala Leu Arg Asp Ala Ser Phe Gly Gln Gly 1250 1255 1260

Thr Gly Thr Ile Trp Leu Asp Asp Met Arg Cys Lys Gly Asn Glu Ser 1265 1270 1275 1280

Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly 1285 1290 1295

His Lys Glu Asp Ala Gly Val Arg Cys Ser Gly Gln Ser Leu Lys Ser 1300 1305 1310

Leu Asn Ala Ser Ser Gly His Leu Ala Leu Ile Leu Ser Ser Ile Phe 1315 1320 1325

Gly Leu Leu Leu Val Leu Phe Ile Leu Phe Leu Thr Trp Cys Arg 1330 1335 1340

Val Gln Lys Gln Lys His Leu Pro Leu Arg Val Ser Thr Arg Arg 1345 1350 1355 1360

Gly Ser Leu Glu Glu Asn Leu Phe His Glu Met Glu Thr Cys Leu Lys 1365 1370 1375

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Gly Cys Glu Asp Ala Ser Asp Thr Ser Leu Leu Gly Val Leu Pro Ala 1395 1400 1405

Ser Glu Ala Thr Lys 1410

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<212> PRT

<213> Homo sapiens

<400> 384

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Cys	Asp	Asp 35	Gly	Trp	Asn	Thr	Thr 40	Ala	Ser	Thr	Val	Val 45	Суѕ	Lys	Gln
Leu	Gly 50	Cys	Pro	Phe	Ser	Phe 55	Ala	Met	Phe	Arg	Phe 60	Gly	Gln	Ala	Val
Thr 65	Arg	His	Gly	Lys	Ile 70	Trp	Leu	Asp	Asp	Val 75	Ser	Cys	Tyr	Gly	Asn 80
Glu	Ser	Ala	Leu	Trp 85	Glu	Cys	Gln	His	Arg 90	Glu	Trp	Gly	Ser	His 95	Asn
Cys	Tyr	His	Gly 100	Glu	Asp	Val	Gly	Val 105	Asn	Cys	Tyr	Gly	Glu 110	Ala	Asn
Leu	Gly	Leu 115	Arg	Leu	Val	Asp	Gly 120	Asn	Asn	Ser	Cys	Ser 125	Gly	Arg	Val
Glu	Val 130	Lys	Phe	Gln	Glu	Arg 135	Trp	Gly	Thr	Ile	Cys 140	Asp	Asp	Gly	Trp
Asn 145	Leu	Asn	Thr	Ala	Ala 150	Val	Val	Cys	Arg	Gln 155	Leu	Gly	Cys	Pro	Ser 160
Ser	Phe	Ile	Ser	Ser 165	Gly	Val	Val	Asn	Ser 170	Pro	Ala	Val	Leu	Arg 175	Pro
Ile	Trp	Leu	Asp 180	Asp	Ile	Leu	Cys	Gln 185	Gly	Asn	Glu	Leu	Ala 190	Leu	Trp
Asn	Cys	Arg 195	His	Arg	Gly	Trp	Gly 200	Asn	His	Asp	Cys	Ser 205	His	Asn	Glu
Asp	Val 210	Thr	Leu	Thr	Cys	Tyr 215	Asp	Ser	Ser	Asp	Leu 220	Glu	Leu	Arg	Leu
Val 225	Gly	Gly	Thr	Asn	Arg 230	Cys	Met	Gly	Arg	Val 235	Glu	Leu	Lys	Ile	Gln 240
Gly	Arg	Trp	Gly	Thr 245	Val	Cys	His	His	Lys 250	Trp	Asn	Asn	Ala	Ala 255	Ala

Asp Val Val Cys Lys Gln Leu Gly Cys Gly Thr Ala Leu His Phe Ala Gly Leu Pro His Leu Gln Ser Gly Ser Asp Val Val Trp Leu Asp Gly Val Ser Cys Ser Gly Asn Glu Ser Phe Leu Trp Asp Cys Arg His Ser Gly Thr Val Asn Phe Asp Cys Leu His Gln Asn Asp Val Ser Val Ile Cys Ser Asp Gly Ala Asp Leu Glu Leu Arg Leu Ala Asp Gly Ser Asn Asn Cys Ser Gly Arg Val Glu Val Arg Ile His Glu Gln Trp Trp Thr Ile Cys Asp Gln Asn Trp Lys Asn Glu Gln Ala Leu Val Val Cys Lys Gln Leu Gly Cys Pro Phe Ser Val Phe Gly Ser Arg Arg Ala Lys Pro Ser Asn Glu Ala Arg Asp Ile Trp Ile Asn Ser Ile Ser Cys Thr Gly Asn Glu Ser Ala Leu Trp Asp Cys Thr Tyr Asp Gly Lys Ala Lys Arg Thr Cys Phe Arg Arg Ser Asp Ala Gly Val Ile Cys Ser Asp Lys Ala Asp Leu Asp Leu Arg Leu Val Gly Ala His Ser Pro Cys Tyr Gly Arg Leu Glu Val Lys Tyr Gln Gly Glu Trp Gly Thr Val Cys His Asp Arg Trp Ser Thr Arg Asn Ala Ala Val Val Cys Lys Gln Leu Gly Cys Gly Lys Pro Met His Val Phe Gly Met Thr Tyr Phe Lys Glu Ala Ser Gly Pro Ile Trp Leu Asp Asp Val Ser Cys Ile Gly Asn Glu Ser Asn Ile

Trp Asp Cys Glu His Ser Gly Trp Gly Lys His Asn Cys Val His Arg Glu Asp Val Ile Val Thr Cys Ser Gly Asp Ala Thr Trp Gly Leu Arg Leu Val Gly Gly Ser Asn Arg Cys Ser Gly Arg Leu Glu Val Tyr Phe Gln Gly Arg Trp Gly Thr Val Cys Asp Asp Gly Trp Asn Ser Lys Ala Ala Ala Val Val Cys Ser Gln Leu Asp Cys Pro Ser Ser Ile Ile Gly Met Gly Leu Gly Asn Ala Ser Thr Gly Tyr Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Asp Gly Asp Glu Ser Asp Leu Trp Ser Cys Arg Asn Ser Gly Trp Gly Asn Asn Asp Cys Ser His Ser Glu Asp Val Gly Val Ile Cys Ser Asp Ala Ser Asp Met Glu Leu Arg Leu Val Gly Gly Ser Ser Arg Cys Ala Gly Lys Val Glu Val Asn Val Gln Gly Ala Val Gly Ile Leu Cys Ala Asn Gly Trp Gly Met Asn Ile Ala Glu Val Val Cys Arg Gln Leu Glu Cys Gly Ser Ala Ile Arg Val Ser Arg Glu Pro His Phe Thr Glu Arg Thr Leu His Ile Leu Met Ser Asn Ser Gly Cys Thr Gly Glu Ala Ser Leu Trp Asp Cys Ile Arg Trp Glu Trp Lys Gln Thr Ala Cys His Leu Asn Met Glu Ala Ser Leu Ile Cys Ser Ala His Arg Gln Pro Arg Leu Val Gly Ala Asp Met Pro Cys Ser Gly Arg Val

Glu Val Lys His Ala Asp Thr Trp Arg Ser Val Cys Asp Ser Asp Phe Ser Leu His Ala Ala Asn Val Leu Cys Arg Glu Leu Asn Cys Gly Asp Ala Ile Ser Leu Ser Val Gly Asp His Phe Gly Lys Gly Asn Gly Leu Thr Trp Ala Glu Lys Phe Gln Cys Glu Gly Ser Glu Thr His Leu Ala Leu Cys Pro Ile Val Gln His Pro Glu Asp Thr Cys Ile His Ser Arg Glu Val Gly Val Val Cys Ser Arg Tyr Thr Asp Val Arg Leu Val Asn Gly Lys Ser Gln Cys Asp Gly Gln Val Glu Ile Asn Val Leu Gly His Trp Gly Ser Leu Cys Asp Thr His Trp Asp Pro Glu Asp Ala Arg Val Leu Cys Arg Gln Leu Ser Cys Gly Thr Ala Leu Ser Thr Thr Gly Gly Lys Tyr Ile Gly Glu Arg Ser Val Arg Val Trp Gly His Arg Phe His Cys Leu Gly Asn Glu Ser Leu Leu Asp Asn Cys Gln Met Thr Val Leu Gly Ala Pro Pro Cys Ile His Gly Asn Thr Val Ser Val Ile Cys Thr Gly Ser Leu Thr Gln Pro Leu Phe Pro Cys Leu Ala Asn Val Ser Asp Pro Tyr Leu Ser Ala Val Pro Glu Gly Ser Ala Leu Ile Cys Leu Glu Asp Lys Arg Leu Arg Leu Val Asp Gly Asp Ser Arg Cys Ala Gly Arg Val Glu Ile Tyr His Asp Gly Phe Trp Gly Thr Ile Cys Asp Asp Gly

- Trp Asp Leu Ser Asp Ala His Val Val Cys Gln Lys Leu Gly Cys Gly 1025 1030 1035 1040
- Val Ala Phe Asn Ala Thr Val Ser Ala His Phe Gly Glu Gly Ser Gly
 1045 1050 1055
- Pro Ile Trp Leu Asp Asp Leu Asn Cys Thr Gly Thr Glu Ser His Leu 1060 1065 1070
- Trp Gln Cys Pro Ser Arg Gly Trp Gly Gln His Asp Cys Arg His Lys 1075 1080 1085
- Glu Asp Ala Gly Val Ile Cys Ser Glu Phe Thr Ala Leu Arg Leu Tyr 1090 1095 1100
- Ser Glu Thr Glu Ser Cys Ala Gly Arg Leu Glu Val Phe Tyr 1105 1110 1115 1120
- Asn Gly Thr Trp Gly Ser Val Gly Arg Arg Asn Ile Thr Thr Ala Ile 1125 1130 1135
- Ala Gly Ile Val Cys Arg Gln Leu Gly Cys Gly Glu Asn Gly Val Val 1140 1145 1150
- Ser Leu Ala Pro Leu Ser Lys Thr Gly Ser Gly Phe Met Trp Val Asp 1155 1160 1165
- Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser 1170 1175 1180
- Ala Pro Trp Glu Arg Arg Ile Ser Ser Pro Ala Glu Glu Thr Trp Ile 1185 1190 1195 1200
- Thr Cys Glu Asp Arg Ile Arg Val Arg Gly Gly Asp Thr Glu Cys Ser 1205 1210 1215
- Gly Arg Val Glu Ile Trp His Ala Gly Ser Trp Gly Thr Val Cys Asp 1220 1225 1230
- Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly 1235 1240 1245
- Cys Gly Ser Ala Leu Ala Ala Leu Arg Asp Ala Ser Phe Gly Gln Gly 1250 1255 1260
- Thr Gly Thr Ile Trp Leu Asp Asp Met Arg Cys Lys Gly Asn Glu Ser 1265 1270. 1280

Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly
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His Lys Glu Asp Ala Gly Val Arg Cys Ser Gly Gln Ser Leu Lys Ser 1300 1305 1310

Leu Asn Ala Ser Ser Gly His 1315

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<211> 24

<212> PRT

<213> Homo sapiens

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Leu Ala Leu Ile Leu Ser Ser Ile Phe Gly Leu Leu Leu Leu Val Leu 1 5 10 15

Phe Ile Leu Phe Leu Thr Trp Cys 20

<210> 386

<211> 70

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<213> Homo sapiens

<400> 386

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1 10 15

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20 25 30

Lys Arg Glu Asp Pro His Gly Thr Arg Thr Ser Asp Asp Thr Pro Asn 35 40 45

His Gly Cys Glu Asp Ala Ser Asp Thr Ser Leu Leu Gly Val Leu Pro 50 55 60

Ala Ser Glu Ala Thr Lys 65 70

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aagaacctgg agaggateet teagttetgg ceatteeagg gaeeeteeag aaacacagtg 2640 ttteaagaga teetaaaaaa acctgeetgt eecaggaeee tatggtaatg aacaccaaac 2700

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<211> 761

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<213> Homo sapiens

<400> 389

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Gly Gly Gln Gly Pro Met Pro Arg Val Arg Tyr Tyr Ala Gly Asp 35 40 45

Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp Phe 50 55 60

Asp Thr Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly Ala 65 70 75 80

Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro Arg
85 90 95

Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser Glu
100 105 110

Cys Ala Phe Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe Ile 115 120 125

Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly Thr 130 135 140

Phe Ala Phe Ser Pro Ala Cys Thr Phe Ile Glu Leu Gln Asp Ser Tyr 145 150 155 160

Leu Leu Pro Ile Ser Glu Asp Lys Val Met Glu Gly Lys Gly Gln Ser 165 170 175

Pro Phe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly Met

Leu Tyr Ser Gly Thr Met Asn Asn Phe Leu Gly Ser Glu Pro Ile Leu Met Arg Thr Leu Gly Ser Gln Pro Val Leu Lys Thr Asp Asn Phe Leu Arg Trp Leu His His Asp Ala Ser Phe Val Ala Ala Ile Pro Ser Thr Gln Val Val Tyr Phe Phe Phe Glu Glu Thr Ala Ser Glu Phe Asp Phe Phe Glu Arg Leu His Thr Ser Arg Val Ala Arg Val Cys Lys Asn Asp Val Gly Glu Lys Leu Leu Gln Lys Lys Trp Thr Thr Phe Leu Lys Ala Gln Leu Cys Thr Gln Pro Gly Gln Leu Pro Phe Asn Val Ile Arg His Ala Val Leu Leu Pro Ala Asp Ser Pro Thr Ala Pro His Ile Tyr Ala Val Phe Thr Ser Gln Trp Gln Val Gly Gly Thr Arg Ser Ser Ala Val Cys Ala Phe Ser Leu Leu Asp Ile Glu Arg Val Phe Lys Gly Lys Tyr Lys Glu Leu Asn Lys Glu Thr Ser Arg Trp Thr Thr Tyr Arg Gly Pro Glu Thr Asn Pro Arg Pro Gly Ser Cys Ser Val Gly Pro Ser Ser Asp Lys Ala Leu Thr Phe Met Lys Asp His Phe Leu Met Asp Glu

Gln Val Val Gly Thr Pro Leu Leu Val Lys Ser Gly Val Glu Tyr Thr

Arg Leu Ala Val Glu Thr Ala Gln Gly Leu Asp Gly His Ser His Leu

Val Met Tyr Leu Gly Thr Thr Gly Ser Leu His Lys Ala Val Val

Ser	Gly 450	Asp	Ser	Ser	Ala	His 455	Leu	Val	Glu	Glu	Ile 460	Gln	Leu	Phe	Pro
Asp 465	Pro	Glu	Pro	Val	Arg 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Thr	Gln	Gly	Ala 480
Val	Phe	Val	Gly	Phe 485	Ser	Gly	Gly	Val	Trp 490	Arg	Val	Pro	Arg	Ala 495	Asn
Cys	Ser	Val	Tyr 500	Glu	Ser	Cys	Val	Asp 505	Cys	Val	Leu	Ala	Arg 510	Asp	Pro
His	Cys	Ala 515	Trp	Asp	Pro	Glu	Ser 520	Arg	Thr	Cys	Cys	Leu 525	Leu	Ser	Ala
Pro	Asn 530	Leu	Asn	Ser	Trp	Lys 535	Gln	Asp	Met	Glu	Arg 540	Gly	Asn	Pro	Glu
Trp 545	Ala	Cys	Ala	Ser	Gly 550	Pro	Met	Ser	Arg	Ser 555	Leu	Arg	Pro	Gln	Ser 560
Arg	Pro	Gln	Ile	Ile 565	Lys	Glu	Val	Leu	Ala 570	Val	Pro	Asn	Ser	Ile 575	Leu
Glu	Leu	Pro	Cys 580	Pro	His	Leu	Ser	Ala 585	Leu	Ala	Ser	Tyr	Tyr 590	Trp	Ser
His	Gly	Pro 595	Ala	Ala	Val	Pro	Glu 600	Ala	Ser	Ser	Thr	Val 605	Tyr	Asn	Gly
Ser	Leu 610	Leu	Leu	Ile	Val	Gln 615	Asp	Gly	Val	Gly	Gly 620	Leu	Tyr	Gln	Cys
Trp 625	Ala	Thr	Glu	Asn	Gly 630	Phe	Ser	Tyr	Pro	Val 635	Ile	Ser	Tyr	Trp	Val 640
Asp	Ser	Gln	Asp	Gln 645	Thr	Leu	Ala	Leu	Asp 650	Pro	Glu	Leu	Ala	Gly 655	Ile
Pro	Arg	Glu	His 660	Val	Lys	Val	Pro	Leu 665	Thr	Arg	Val	Ser	Gly 670	Gly	Ala
Ala	Leu	Ala 675	Ala	Gln	Gln	Ser	Tyr 680	Trp	Pro	His	Phe	Val 685	Thr	Val	Thr

Val Leu Phe Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala

690 695 700

Ser Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu 705 710 715 720

Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His Leu 725 730 735

Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp Ala Asp
740 745 750

Asn Asn Cys Leu Gly Thr Glu Val Ala 755 760

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<211> 31

<212> PRT

<213> Homo sapiens

<400> 390

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Phe Leu Phe Gln Leu Leu Gln Leu Leu Leu Pro Thr Thr Ala 20 25 30

<210> 391

<211> 730

<212> PRT

<213> Homo sapiens

<400> 391

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Asp Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp 20 25 30

Phe Asp Thr Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly 35 40 45

Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro 50 55 60

Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser 65 70 75 80

Glu	Cys	Ala	Phe	Lys 85	Lys	Lys	Ser	Asn	Glu 90	Thr	Gln	Cys	Phe	Asn 95	Phe
Ile	Arg	Val	Leu 100	Val	Ser	Tyr	Asn	Val 105	Thr	His	Leu	Tyr	Thr 110	Cys	Gly
Thr	Phe	Ala 115	Phe	Ser	Pro	Ala	Cys 120	Thr	Phe	Ile	Glu	Leu 125	Gln	Asp	Ser
Tyr	Leu 130	Leu	Pro	Ile	Ser	Glu 135	Asp	Lys	Val	Met	Glu 140	Gly	Lys	Gly	Gln
Ser 145	Pro	Phe	Asp	Pro	Ala 150	His	Lys	His	Thr	Ala 155	Val	Leu	Val	Asp	Gly 160
Met	Leu	Tyr	Ser	Gly 165	Thr	Met	Asn	Asn	Phe 170	Leu	Gly	Ser	Glu	Pro 175	Ile
Leu	Met	Arg	Thr 180	Leu	Gly	Ser	Gln	Pro 185	Val	Leu	Lys	Thr	Asp 190	Asn	Phe
Leu	Arg	Trp 195	Leu	His	His	Asp	Ala 200	Ser	Phe	Val	Ala	Ala 205	Ile	Pro	Ser
Thr	Gln 210	Val	Val	Tyr	Phe	Phe 215	Phe	Glu	Glu	Thr	Ala 220	Ser	Glu	Phe	Asp
Phe 225	Phe	Glu	Arg	Leu	His 230	Thr	Ser	Arg	Val	Ala 235	Arg	Val	Cys	Lys	Asn 240
Asp	Val	Gly	Gly	Glu 245	Lys	Leu	Leu	Gln	Lys 250	Lys	Trp	Thr	Thr	Phe 255	Leu
Lys	Ala	Gln	Leu 260	Leu	Cys	Thr	Gln	Pro 265	Gly	Gln	Leu	Pro	Phe 270	Asn	Val
Ile	Arg	His 275	Ala	Val	Leu	Leu	Pro 280	Ala	Asp	Ser	Pro	Thr 285	Ala	Pro	His
Ile	Tyr 290	Ala	Val	Phe	Thr	Ser 295	Gln	Trp	Gln	Val	Gly 300	Gly	Thr	Arg	Ser
Ser 305	Ala	Val	Cys	Ala	Phe 310	Ser	Leu	Leu	Asp	Ile 315	Glu	Arg	Val	Phe	Lys 320
Gly	Lys	Tyr	Lys	Glu 325	Leu	Asn	Lys	Glu	Thr 330	Ser	Arg	Trp	Thr	Thr 335	Tyr

Arg Gly Pro Glu Thr Asn Pro Arg Pro Gly Ser Cys Ser Val Gly Pro Ser Ser Asp Lys Ala Leu Thr Phe Met Lys Asp His Phe Leu Met Asp Glu Gln Val Val Gly Thr Pro Leu Leu Val Lys Ser Gly Val Glu Tyr Thr Arg Leu Ala Val Glu Thr Ala Gln Gly Leu Asp Gly His Ser His Leu Val Met Tyr Leu Gly Thr Thr Gly Ser Leu His Lys Ala Val Val Ser Gly Asp Ser Ser Ala His Leu Val Glu Glu Ile Gln Leu Phe Pro Asp Pro Glu Pro Val Arg Asn Leu Gln Leu Ala Pro Thr Gln Gly Ala Val Phe Val Gly Phe Ser Gly Gly Val Trp Arg Val Pro Arg Ala Asn Cys Ser Val Tyr Glu Ser Cys Val Asp Cys Val Leu Ala Arg Asp Pro His Cys Ala Trp Asp Pro Glu Ser Arg Thr Cys Cys Leu Leu Ser Ala Pro Asn Leu Asn Ser Trp Lys Gln Asp Met Glu Arg Gly Asn Pro Glu Trp Ala Cys Ala Ser Gly Pro Met Ser Arg Ser Leu Arg Pro Gln Ser Arg Pro Gln Ile Ile Lys Glu Val Leu Ala Val Pro Asn Ser Ile Leu Glu Leu Pro Cys Pro His Leu Ser Ala Leu Ala Ser Tyr Tyr Trp Ser His Gly Pro Ala Ala Val Pro Glu Ala Ser Ser Thr Val Tyr Asn Gly Ser Leu Leu Ile Val Gln Asp Gly Val Gly Gly Leu Tyr Gln

Cys Trp Ala Thr Glu Asn Gly Phe Ser Tyr Pro Val Ile Ser Tyr Trp Val Asp Ser Gln Asp Gln Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly Ile Pro Arg Glu His Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly Ala Ala Leu Ala Ala Gln Gln Ser Tyr Trp Pro His Phe Val Thr Val Thr Val Leu Phe Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala Ser Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His Leu Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp Ala Asp Asn Asn Cys Leu Gly Thr Glu Val Ala <210> 392 <211> 652 <212> PRT <213> Homo sapiens <400> 392 Gly Gly Gly Gln Gly Pro Met Pro Arg Val Arg Tyr Tyr Ala Gly Asp Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp Phe Asp Thr Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro

Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser

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Ile	Arg	Val	Leu 100	Val	Ser	Tyr	Asn	Val 105	Thr	His	Leu	Tyr	Thr 110	Cys	Gly
Thr	Phe	Ala 115	Phe	Ser	Pro	Ala	Cys 120	Thr	Phe	Ile	Glu	Leu 125	Gln	Asp	Ser
Tyr	Leu 130	Leu	Pro	Ile	Ser	Glu 135	Asp	Lys	Val	Met	Glu 140	Gly	Lys	Gly	Gln
Ser 145	Pro	Phe	Asp	Pro	Ala 150	His	Lys	His	Thr	Ala 155	Val	Leu	Val	Asp	Gly 160
Met	Leu	Tyr	Ser	Gly 165	Thr	Met	Asn	Asn	Phe 170	Leu	Gly	Ser	Glu	Pro 175	Ile
Leu	Met	Arg	Thr 180	Leu	Gly	Ser	Gln	Pro 185	Val	Leu	Lys	Thr	Asp 190	Asn	Phe
Leu	Arg	Trp 195	Leu	His	His	Asp	Ala 200	Ser	Phe	Val	Ala	Ala 205	Ile	Pro	Ser
Thr	Gln 210	Val	Val	Tyr	Phe	Phe 215	Phe	Glu	Glu	Thr	Ala 220	Ser	Glu	Phe	Asp
Phe 225	Phe	Glu	Arg	Leu	His 230	Thr	Ser	Arg	Val	Ala 235	Arg	Val	Cys	Lys	Asn 240
Asp	Val	Gly	Gly	Glu 245	Lys	Leu	Leu	Gln	Lys 250	Lys	Trp	Thr	Thr	Phe 255	Leu
Lys	Ala	Gln	Leu 260	Leu	Cys	Thr	Gln	Pro 265	Gly	Gln	Leu	Pro	Phe 270	Asn	Val
Ile	Arg	His 275	Ala	Val	Leu	Leu	Pro 280	Ala	Asp	Ser	Pro	Thr 285	Ala	Pro	His
Ile	Tyr 290	Ala	Val	Phe	Thr	Ser 295	Gln	Trp	Gln	Val	Gly 300	Gly	Thr	Arg	Ser

Ser Ala Val Cys Ala Phe Ser Leu Leu Asp Ile Glu Arg Val Phe Lys

Gly Lys Tyr Lys Glu Leu Asn Lys Glu Thr Ser Arg Trp Thr Tyr

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Arg	Gly	Pro	Glu 340	Thr	Asn	Pro	Arg	Pro 345	Gly	Ser	Cys	Ser	Val 350	Gly	Pro
Ser	Ser	Asp 355	Lys	Ala	Leu	Thr	Phe 360	Met	Lys	Asp	His	Phe 365	Leu	Met	Asp
Glu	Gln 370	Val	Val	Gly	Thr	Pro 375	Leu	Leu	Val	Lys	Ser 380	Gly	Val	Glu	Туг
Thr 385	Arg	Leu	Ala	Val	Glu 390	Thr	Ala	Gln	Gly	Leu 395	Asp	Gly	His	Ser	His 400
Leu	Val	Met	Tyr	Leu 405	Gly	Thr	Thr	Thr	Gly 410	Ser	Leu	His	Lys	Ala 415	Va]
Val	Ser	Gly	Asp 420	Ser	Ser	Ala	His	Leu 425	Val	Glu	Glu	Ile	Gln 430	Leu	Phe
Pro	Asp	Pro 435	Glu	Pro	Val	Arg	Asn 440	Leu	Gln	Leu	Ala	Pro 445	Thr	Gln	Gl
Ala	Val 450	Phe	Val	Gly	Phe	Ser 455	Gly	Gly	Val	Trp	Arg 460	Val	Pro	Arg	Ala
Asn 465	Cys	Ser	Val	Tyr	Glu 470	Ser	Cys	Val	Asp	Cys 475	Val	Leu	Ala	Arg	Asp 480
Pro	His	Cys	Ala	Trp 485	Asp	Pro	Glu	Ser	Arg 490	Thr	Cys	Cys	Leu	Leu 495	Ser
Ala	Pro	Asn	Leu 500	Asn	Ser	Trp	Lys	Gln 505	Asp	Met	Glu	Arg	Gly 510	Asn	Pro
Glu	Trp	Ala 515	Cys	Ala	Ser	Gly	Pro 520	Met	Ser	Arg	Ser	Leu 525	Arg	Pro	Glr
Ser	Arg 530	Pro	Gln	Ile	Ile	Lys 535	Glu	Val	Leu	Ala	Val 540	Pro	Asn	Ser	Ile
Leu 545	Glu	Leu	Pro	Cys	Pro 550	His	Leu	Ser	Ala	Leu 555	Ala	Ser	Tyr	Tyr	Trp 560
Ser	His	Gly	Pro	Ala 565	Ala	Val	Pro	Glu	Ala 570	Ser	Ser	Thr	Val	Tyr 575	Asn

Gly Ser Leu Leu Ile Val Gln Asp Gly Val Gly Gly Leu Tyr Gln

580 585 590

Cys Trp Ala Thr Glu Asn Gly Phe Ser Tyr Pro Val Ile Ser Tyr Trp 595 600 605

Val Asp Ser Gln Asp Gln Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly 610 620

Ile Pro Arg Glu His Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly 625 630 635 640

Ala Ala Leu Ala Ala Gln Gln Ser Tyr Trp Pro His 645 650

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<211> 21

<212> PRT

<213> Homo sapiens

<400> 393

Phe Val Thr Val Thr Val Leu Phe Ala Leu Val Leu Ser Gly Ala Leu 1 5 10 15

Ile Ile Leu Val Ala 20

<210> 394

<211> 57

<212> PRT

<213> Homo sapiens

<400> 394

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1 5 10 15

Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His Leu 20 25 30

Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp Ala Asp 35 40 45

Asn Asn Cys Leu Gly Thr Glu Val Ala 50 55

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<400> 404

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<213> Homo sapiens

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20 25 30

Arg Ile Thr Gln Arg Ala Leu Asp Tyr Gly Val Gln Ala Gly Met Lys
35 40 45

Met Ile Glu Gln Met Leu Lys Glu Lys Lys Leu Pro Asp Leu Ser Gly 50 55 60

Ser Glu Ser Leu Glu Phe Leu Lys Val Asp Tyr Val Asn Tyr Asn Phe 65 70 75 80

Ser Asn Ile Lys Ile Ser Ala Phe Ser Phe Pro Asn Thr Ser Leu Ala 85 90 95

Phe Val Pro Gly Val Gly Ile Lys Ala Leu Thr Asn His Gly Thr Ala 100 105 110

Asn Ile Ser Thr Asp Trp Gly Phe Glu Ser Pro Leu Phe Val Leu Tyr 115 120 125

Asn Ser Phe Ala Glu Pro Met Glu Lys Pro Ile Leu Lys Asn Leu Asn 130 135 140

Glu 145	Met	Leu	Cys	Pro	Ile 150	Ile	Ala	Ser	Glu	Val 155	Lys	Ala	Leu	Asn	Ala 160
Asn	Leu	Ser	Thr	Leu 165	Glu	Val	Leu	Thr	Lys 170	Ile	Asp	Asn	Tyr	Thr 175	Leu
Leu	Asp	Tyr	Ser 180	Leu	Ile	Ser	Ser	Pro 185	Glu	Ile	Thr	Glu	Asn 190	Tyr	Leu
Asp	Leu	Asn 195	Leu	Lys	Gly	Val	Phe 200	Tyr	Pro	Leu	Glu	Asn 205	Leu	Thr	Asp
Pro	Pro 210	Phe	Ser	Pro	Val	Pro 215	Phe	Val	Leu	Pro	Glu 220	Arg	Ser	Asn	Ser
Met 225	Leu	Tyr	Ile	Gly	Ile 230	Ala	Glu	Tyr	Phe	Phe 235	Lys	Ser	Ala	Ser	Phe 240
Ala	His	Phe	Thr	Ala 245	Gly	Val	Phe	Asn	Leu 250	Thr	Leu	Ser	Thr	Glu 255	Glu
Ile	Ser	Asn	His 260	Phe	Val	Gln	Asn	Ser 265	Gln	Gly	Leu	Gly	Asn 270	Val	Leu
Ser	Arg	Ile 275	Ala	Glu	Ile	Tyr	Ile 280	Leu	Ser	Gln	Pro	Phe 285	Met	Val	Arg
Ile	Met 290	Ala	Thr	Glu	Pro	Pro 295	Ile	Ile	Asn	Leu	Gln 300	Pro	Gly	Asn	Phe
Thr 305	Leu	Asp	Ile	Pro	Ala 310	Ser	Ile	Met	Met	Leu 315	Thr	Gln	Pro	Lys	Asn 320
Ser	Thr	Val	Glu	Thr 325	Ile	Val	Ser	Met	Asp 330	Phe	Val	Ala	Ser	Thr 335	Ser
Val	Gly	Leu	Val 340	Ile	Leu	Gly	Gln	Arg 345	Leu	Val	Cys	Ser	Leu 350	Ser	Leu
Asn	Arg	Phe 355	Arg	Leu	Ala	Leu	Pro 360	Glu	Ser	Asn	Arg	Ser 365	Asn	Ile	Glu
Val	Leu 370	Arg	Phe	Glu	Asn	Ile 375	Leu	Ser	Ser	Ile	Leu 380	His	Phe	Gly	Val
Leu 385	Pro	Leu	Ala	Asn	Ala 390	Lys	Leu	Gln	Gln	Gly 395	Phe	Pro	Leu	Pro	Asn 400

Pro His Lys Phe Leu Phe Val Asn Ser Asp Ile Glu Val Leu Glu Gly 405 410 415

Phe Leu Leu Ile Ser Thr Asp Leu Lys Tyr Glu Thr Ser Ser Lys Gln 420 425 430

Gln Pro Ser Phe His Val Trp Glu Gly Leu Asn Leu Ile Ser Arg Gln 435 440 445

Trp Arg Gly Lys Ser Ala Pro 450 455

<210> 406

<211> 23

<212> PRT

<213> Homo sapiens

<400> 406

Met Cys Thr Lys Thr Ile Pro Val Leu Trp Gly Cys Phe Leu Leu Trp 1 5 10 15

Asn Leu Tyr Val Ser Ser Ser 20

<210> 407

<211> 432

<212> PRT

<213> Homo sapiens

<400> 407

Gln Thr Ile Tyr Pro Gly Ile Lys Ala Arg Ile Thr Gln Arg Ala Leu

1 5 10 15

Asp Tyr Gly Val Gln Ala Gly Met Lys Met Ile Glu Gln Met Leu Lys
20 25 30

Glu Lys Lys Leu Pro Asp Leu Ser Gly Ser Glu Ser Leu Glu Phe Leu 35 40 45

Lys Val Asp Tyr Val Asn Tyr Asn Phe Ser Asn Ile Lys Ile Ser Ala 50 55 60

Phe Ser Phe Pro Asn Thr Ser Leu Ala Phe Val Pro Gly Val Gly Ile
65 70 75 80

Lys Ala Leu Thr Asn His Gly Thr Ala Asn Ile Ser Thr Asp Trp Gly

Phe	Glu	Ser	Pro 100	Leu	Phe	Val	Leu	Tyr 105	Asn	Ser	Phe	Ala	Glu 110	Pro	Met
Glu	Lys	Pro 115	Ile	Leu	Lys	Asn	Leu 120	Asn	Glu	Met	Leu	Cys 125	Pro	Ile	Ile
Ala	Ser 130	Glu	Val	Lys	Ala	Leu 135	Asn	Ala	Asn	Leu	Ser 140	Thr	Leu	Glu	Val
Leu 145	Thr	Lys	Ile	Asp	Asn 150	Tyr	Thr	Leu	Leu	Asp 155	Tyr	Ser	Leu	Ile	Ser 160
Ser	Pro	Glu	Ile	Thr 165	Glu	Asn	Tyr	Leu	Asp 170	Leu	Asn	Leu	Lys	Gly 175	Val
Phe	Tyr	Pro	Leu 180	Glu	Asn	Leu	Thr	Asp 185	Pro	Pro	Phe	Ser	Pro 190	Val	Pro
Phe	Val	Leu 195	Pro	Glu	Arg	Ser	Asn 200	Ser	Met	Leu	Tyr	Ile 205	Gly	Ile	Ala
Glu	Tyr 210	Phe	Phe	Lys	Ser	Ala 215	Ser	Phe	Ala	His	Phe 220	Thr	Ala	Gly	Val
Phe 225	Asn	Leu	Thr	Leu	Ser 230	Thr	Glu	Glu	Ile	Ser 235	Asn	His	Phe	Val	Gln 240
Asn	Ser	Gln	Gly	Leu 245	Gly	Asn	Val	Leu	Ser 250	Arg	Ile	Ala	Glu	Ile 255	Tyr
Ile	Leu	Ser	Gln 260	Pro	Phe	Met	Val	Arg 265	Ile	Met	Ala	Thr	Glu 270	Pro	Pro
Ile	Ile	Asn 275	Leu	Gln	Pro	Gly	Asn 280	Phe	Thr	Leu	Asp	Ile 285	Pro	Ala	Ser
Ile	Met 290	Met	Leu	Thr	Gln	Pro 295	Lys	Asn	Ser	Thr	Val 300	Glu	Thr	Ile	Val
Ser 305	Met	Asp	Phe	Val	Ala 310	Ser	Thr	Ser	Val	Gly 315	Leu	Val	Ile	Leu	Gly 320
Gln	Arg	Leu	Val	Cys	Ser	Leu	Ser	Leu	Asn	Arg	Phe	Arg	Leu	Ala	Leu

Pro Glu Ser Asn Arg Ser Asn Ile Glu Val Leu Arg Phe Glu Asn Ile

340 345 350

Leu Ser Ser Ile Leu His Phe Gly Val Leu Pro Leu Ala Asn Ala Lys 355 360 365

Leu Gln Gln Gly Phe Pro Leu Pro Asn Pro His Lys Phe Leu Phe Val 370 375 380

Asn Ser Asp Ile Glu Val Leu Glu Gly Phe Leu Leu Ile Ser Thr Asp 385 390 395 400

Leu Lys Tyr Glu Thr Ser Ser Lys Gln Gln Pro Ser Phe His Val Trp 405 410 415

Glu Gly Leu Asn Leu Ile Ser Arg Gln Trp Arg Gly Lys Ser Ala Pro 420 425 430

<210> 408

<211> 483

<212> PRT

<213> Homo sapiens

<400> 408

Met Ala Arg Gly Pro Cys Asn Ala Pro Arg Trp Val Ser Leu Met Val 1 5 10 15

Leu Val Ala Ile Gly Thr Ala Val Thr Ala Ala Val Asn Pro Gly Val
20 25 30

Val Val Arg Ile Ser Gln Lys Gly Leu Asp Tyr Ala Ser Gln Gln Gly 35 40 45

Thr Ala Ala Leu Gln Lys Glu Leu Lys Arg Ile Lys Ile Pro Asp Tyr 50 55 60

Ser Asp Ser Phe Lys Ile Lys His Leu Gly Lys Gly His Tyr Ser Phe 65 70 75 80

Tyr Ser Met Asp Ile Arg Glu Phe Gln Leu Pro Ser Ser Gln Ile Ser 85 90 95

Met Val Pro Asn Val Gly Leu Lys Phe Ser Ile Ser Asn Ala Asn Ile 100 105 110

Lys Ile Ser Gly Lys Trp Lys Ala Gln Lys Arg Phe Leu Lys Met Ser Gly Asn Phe Asp Leu Ser Ile Glu Gly Met Ser Ile Ser Ala Asp Leu Lys Leu Gly Ser Asn Pro Thr Ser Gly Lys Pro Thr Ile Thr Cys Ser Ser Cys Ser Ser His Ile Asn Ser Val His Val His Ile Ser Lys Ser Lys Val Gly Trp Leu Ile Gln Leu Phe His Lys Lys Ile Glu Ser Ala Leu Arg Asn Lys Met Asn Ser Gln Val Cys Glu Lys Val Thr Asn Ser Val Ser Ser Lys Leu Gln Pro Tyr Phe Gln Thr Leu Pro Val Met Thr Lys Ile Asp Ser Val Ala Gly Ile Asn Tyr Gly Leu Val Ala Pro Pro Ala Thr Thr Ala Glu Thr Leu Asp Val Gln Met Lys Gly Glu Phe Tyr Ser Glu Asn His His Asn Pro Pro Pro Phe Ala Pro Pro Val Met Glu Phe Pro Ala Ala His Asp Arg Met Val Tyr Leu Gly Leu Ser Asp Tyr Phe Phe Asn Thr Ala Gly Leu Val Tyr Gln Glu Ala Gly Val Leu Lys Met Thr Leu Arg Asp Met Ile Pro Lys Glu Ser Lys Phe Arg Leu Thr Thr Lys Phe Phe Gly Thr Phe Leu Pro Glu Val Ala Lys Lys Phe Pro Asn Met Lys Ile Gln Ile His Val Ser Ala Ser Thr Pro Pro His Leu Ser Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro Ala Val Asp Val

Gln Ala Phe Ala Val Leu Pro Asn Ser Ser Leu Ala Ser Leu Phe Leu Ile Gly Met His Thr Thr Gly Ser Met Glu Val Ser Ala Glu Ser Asn Arg Leu Val Gly Glu Leu Lys Leu Asp Arg Leu Leu Leu Glu Leu Lys His Ser Asn Ile Gly Pro Phe Pro Val Glu Leu Leu Gln Asp Ile Met Asn Tyr Ile Val Pro Ile Leu Val Leu Pro Arg Val Asn Glu Lys Leu Gln Lys Gly Phe Pro Leu Pro Thr Pro Ala Arg Val Gln Leu Tyr Asn Val Val Leu Gln Pro His Gln Asn Phe Leu Leu Phe Gly Ala Asp Val Val Tyr Lys <210> 409 <211> 481 <212> PRT <213> Homo sapiens <400> 409 Met Gly Ala Leu Ala Arg Ala Leu Pro Ser Ile Leu Leu Ala Leu Leu Leu Thr Ser Thr Pro Glu Ala Leu Gly Ala Asn Pro Gly Leu Val Ala Arg Ile Thr Asp Lys Gly Leu Gln Tyr Ala Ala Gln Glu Gly Leu Leu Ala Leu Gln Ser Glu Leu Leu Arg Ile Thr Leu Pro Asp Phe Thr Gly Asp Leu Arg Ile Pro His Val Gly Arg Gly Arg Tyr Glu Phe His Ser Leu Asn Ile His Glu Phe Gln Leu Pro Ser Ser Gln Ile Ser Met Val

Pro Asn Val Gly Leu Lys Phe Ser Ile Ser Asn Ala Asn Ile Lys Ile Ser Gly Lys Trp Lys Ala Gln Lys Arg Phe Leu Lys Met Ser Gly Asn Phe Asp Leu Ser Ile Glu Gly Met Ser Ile Ser Ala Asp Leu Lys Leu Gly Ser Asn Pro Thr Ser Gly Lys Pro Thr Ile Thr Cys Ser Ser Cys Ser Ser His Ile Asn Ser Val His Val His Ile Ser Lys Ser Lys Val Gly Trp Leu Ile Gln Leu Phe His Lys Lys Ile Glu Ser Ala Leu Arg Asn Lys Met Asn Ser Gln Val Cys Glu Lys Val Thr Asn Ser Val Ser Ser Lys Leu Gln Pro Tyr Phe Gln Thr Leu Pro Val Met Thr Lys Ile Asp Ser Val Ala Gly Ile Asn Tyr Gly Leu Val Ala Pro Pro Ala Thr Thr Ala Glu Thr Leu Asp Val Gln Met Lys Gly Glu Phe Tyr Ser Glu Asn His His Asn Pro Pro Pro Phe Ala Pro Pro Val Met Glu Phe Pro Ala Ala His Asp Arg Met Val Tyr Leu Gly Leu Ser Asp Tyr Phe Phe Asn Thr Ala Gly Leu Val Tyr Gln Glu Ala Gly Val Leu Lys Met Thr Leu Arg Asp Asp Met Ile Pro Lys Glu Ser Lys Phe Arg Leu Thr Thr Lys Phe Phe Gly Thr Phe Leu Pro Glu Val Ala Lys Lys Phe Pro Asn Met Lys Ile Gln Ile His Val Ser Ala Ser Thr Pro Pro His Leu Ser

Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro Ala Val Asp Val Gln Ala 355 360 365 Leu Ala Val Leu Pro Asn Ser Ser Leu Ala Ser Leu Phe Leu Ile Gly 370 375 380 Met His Thr Gly Ser Met Glu Val Ser Ala Glu Ser Asn Arg Leu 385 390 395 400 Val Gly Glu Leu Lys Leu Asp Arg Leu Leu Glu Leu Lys His Ser 405 410 Asn Ile Gly Pro Phe Pro Val Glu Leu Leu Gln Asp Ile Met Asn Tyr 425 Ile Val Pro Ile Leu Val Leu Pro Arg Val Asn Glu Lys Leu Gln Lys 435 440 Gly Phe Pro Leu Pro Thr Pro Ala Arg Val Gln Leu Tyr Asn Val Val 455 Leu Gln Pro His Gln Asn Phe Leu Leu Phe Gly Ala Asp Val Val Tyr 465 470 475 480 Lys <210> 410 <211> 383 <212> PRT <213> Homo sapiens <400> 410 Met Arg Ile Ala His Ala Ser Ser Arg Gly Asn Ile Ser Ile Phe Ser 10 Val Phe Leu Ile Pro Leu Ile Ala Tyr Ile Leu Ile Leu Pro Gly Val 20 25 Arg Arg Lys Arg Val Val Thr Thr Val Thr Tyr Val Leu Met Leu Ala 45 Val Gly Gly Ala Leu Ile Ala Ser Leu Ile Tyr Pro Cys Trp Ala Ser

Gly Ser Gln Met Ile Tyr Thr Gln Phe Arg Gly His Ser Asn Glu Arg

65					70					75					80
Ile	Leu	Ala	Lys	Ile 85	Gly	Val	Glu	Ile	Gly 90	Leu	Gln	Lys	Val	Asn 95	Val
Thr	Leu	Lys	Phe 100	Glu	Arg	Leu	Leu	Ser 105	Ser	Asn	Asp	Val	Leu 110	Pro	Gly
Ser	Asp	Met 115	Thr	Glu	Leu	Tyr	Tyr 120	Asn	Glu	Gly	Phe	Asp 125	Ile	Ser	Gly
Ile	Ser 130	Ser	Met	Ala	Glu	Ala 135	Leu	His	His	Gly	Leu 140	Glu	Asn	Gly	Leu
Pro 145	Tyr	Pro	Met	Leu	Ser 150	Val	Leu	Glu	Tyr	Phe 155	Ser	Leu	Asn	Gln	Asp 160
Scr	Phe	Asp	Trp	Gly 165	Arg	His	Tyr	Arg	Val 170	Ala	Gly	His	Tyr	Thr 175	His
Ala	Ala	Ile	Trp 180	Phe	Ala	Phe	Ala	Cys 185	Trp	Cys	Leu	Ser	Val 190	Val	Leu
Met	Leu	Phe 195	Leu	Pro	His	Asn	Ala 200	Tyr	Lys	Ser	Ile	Leu 205	Ala	Thr	Gly
Ile	Ser 210	Cys	Leu	Ile	Ala	Cys 215	Leu	Val	Tyr	Leu	Leu 220	Leu	Ser	Pro	Cys
Glu 225	Leu	Arg	Ile	Ala	Phe 230	Thr	Gly	Glu	Asn	Phe 235	Glu	Arg	Val	Asp	Leu 240
Thr	Ala	Thr	Phe	Ser 245	Phe	Cys	Phe	Tyr	Leu 250	Ile	Phe	Ala	Ile	Gly 255	Ile
Leu	Cys	Val	Leu 260	Cys	Gly	Leu	Gly	Leu 265	Gly	Ile	Cys	Glu	His 270	Trp	Arg
Ile	Tyr	Thr 275	Leu	Ser	Thr	Phe	Leu 280	Asp	Ala	Ser	Leu	Asp 285	Glu	His	Val
Gly	Pro 290	Lys	Trp	Lys	Lys	Leu 295	Pro	Thr	Gly	Gly	Pro 300	Ala	Leu	Gln	Gly
Val 305	Gln	Ile	Gly	Ala	Tyr 310	Gly	Thr	Asn	Thr	Thr 315	Asn	Ser	Ser	Arg	Asp 320

Lys Asn Asp Ile Ser Ser Asp Lys Thr Ala Gly Ser Ser Gly Phe Gln

325 330 335

Ser Arg Thr Ser Thr Cys Gln Ser Ser Ala Ser Ser Ala Ser Leu Arg 340 345 350

Ser Gln Ser Ser Ile Glu Thr Val His Asp Glu Ala Glu Leu Glu Arg 355 360 365

Thr His Val His Phe Leu Gln Glu Pro Cys Ser Ser Ser Str Thr 370 375 380

<210> 411

<211> 399

<212> PRT

<213> Homo sapiens

<400> 411

Met Lys Met Arg Phe Leu Gly Leu Val Val Cys Leu Val Leu Trp Pro 1 5 10 15

Leu His Ser Glu Gly Ser Gly Gly Lys Leu Thr Ala Val Asp Pro Glu
20 25 30

Thr Asn Met Asn Val Ser Glu Ile Ile Ser Tyr Trp Gly Phe Pro Ser 35 40 45

Glu Glu Tyr Leu Val Glu Thr Glu Asp Gly Tyr Ile Leu Cys Leu Asn 50 55 60

Arg Ile Pro His Gly Arg Lys Asn His Ser Asp Lys Gly Pro Lys Pro 65 70 75 80

Val Val Phe Leu Gln His Gly Leu Leu Ala Asp Ser Ser Asn Trp Val 85 90 95

Thr Asn Leu Ala Asn Ser Ser Leu Gly Phe Ile Leu Ala Asp Ala Gly 100 105 110

Phe Asp Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Lys
115 120 125

His Lys Thr Leu Ser Val Ser Gln Asp Glu Phe Trp Ala Phe Ser Tyr 130 135 140

Asp Glu Met Ala Lys Tyr Asp Leu Pro Ala Ser Ile Asn Phe Ile Leu 145 150 155 160

Asn Lys Thr Gly Gln Glu Gln Val Tyr Tyr Val Gly His Ser Gln Gly 165 170 Thr Thr Ile Gly Phe Ile Ala Phe Ser Gln Ile Pro Glu Leu Ala Lys 180 185 190 Arg Ile Lys Met Phe Phe Ala Leu Gly Pro Val Ala Ser Val Ala Phe 195 200 205 Cys Thr Ser Pro Met Ala Lys Leu Gly Arg Leu Pro Asp His Leu Ile 210 215 220 Lys Asp Leu Phe Gly Asp Lys Glu Phe Leu Pro Gln Ser Ala Phe Leu 225 230 235 240 Lys Trp Leu Gly Thr His Val Cys Thr His Val Ile Leu Lys Glu Leu 245 250

Cys Gly Asn Leu Cys Phe Leu Leu Cys Gly Phe Asn Glu Arg Asn Leu 260 265 270

Asn Met Ser Arg Val Asp Val Tyr Thr Thr His Ser Pro Ala Gly Thr 275 280 285

Ser Val Gln Asn Met Leu His Trp Ser Gln Ala Val Lys Phe Gln Lys 290 295 300

Phe Gln Ala Phe Asp Trp Gly Ser Ser Ala Lys Asn Tyr Phe His Tyr 305 310 315 320

Asn Gln Ser Tyr Pro Pro Thr Tyr Asn Val Lys Asp Met Leu Val Pro 325 330 335

Thr Ala Val Trp Ser Gly Gly His Asp Trp Leu Ala Asp Val Tyr Asp 340 345 350

Val Asn Ile Leu Leu Thr Gln Ile Thr Asn Leu Val Phe His Glu Ser 355 360 365

Ile Pro Glu Trp Glu His Leu Asp Phe Ile Trp Gly Leu Asp Ala Pro 370 380

Trp Arg Leu Tyr Asn Lys Ile Ile Asn Leu Met Arg Lys Tyr Gln 385 390 395

<210> 412 <211> 19

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<212> PRT
<213> Homo sapiens
<400> 412
Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu
                                      10
Thr Leu Ala
<210> 413
<211> 451
<212> PRT
<213> Homo sapiens
<400> 413
Ala Arg Pro Ala Pro Gly Pro Arg Ser Gly Pro Glu Cys Phe Thr Ala
  1
                  5
                                                           15
Asn Gly Ala Asp Tyr Arg Gly Thr Gln Ser Trp Thr Ala Leu Gln Gly
             20
                                  25
                                                       30
Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro Tyr Asn
         35
                              40
                                                  45
Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His Asn Tyr
     50
                          55
                                              60
Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val Ala Glu
 65
                     70
                                          75
                                                               80
His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala Cys Gln
                 85
                                      90
                                                           95
Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro Pro Pro
            100
                                 105
                                                      110
Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln Thr Cys
        115
                             120
                                                 125
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Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys His Gly
145 150 155 160

Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met Glu Ser

140

135

130

Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp His Thr

165	170	175

Glr	n Pro	Cys	Gly 180	Gly	Asp	Gly	Arg	Ile 185	Ile	Leu	Phe	Asp	Thr 190	Leu	Val
Gly	/ Ala	Cys 195	Gly	Gly	Asn	Tyr	Ser 200	Ala	Met	Ala	Ala	Val 205	Val	Tyr	Ser
Pro	210	Phe	Pro	Asp	Thr	Tyr 215	Ala	Thr	Gly	Arg	Val 220	Cys	Tyr	Trp	Thr
Ile 225	e Arg	Val	Pro	Gly	Ala 230	Ser	Arg	Ile	His	Phe 235	Asn	Phe	Thr	Leu	Phe 240
Asp) Ile	Arg	Asp	Ser 245	Ala	Asp	Met	Val	Glu 250	Leu	Leu	Asp	Gly	Tyr 255	Thr
His	: Arg	Val	Leu 260	Val	Arg	Leu	Ser	Gly 265	Arg	Ser	Ārg	Pro	Pro 270	Leu	Ser
Phe	e Asn	Val 275	Ser	Leu	Asp	Phe	Val 280	Ile	Leu	Tyr	Phe	Phe 285	Ser	Asp	Arg
Ile	290	Gln	Ala	Gln	Gly	Phe 295	Ala	Val	Leu	Tyr	Gln 300	Ala	Thr	Lys	Glu
Glu 305	Pro	Pro	Gln	Glu	Arg 310	Pro	Ala	Val	Asn	Gln 315	Thr	Leu	Ala	Glu	Val 320
Ile	Thr	Glu	Gln	Ala 325	Asn	Leu	Ser	Val	Ser 330	Ala	Ala	His	Ser	Ser 335	Lys
Val	Leu	Tyr	Val 340	Ile	Thr	Pro	Ser	Pro 345	Ser	His	Pro	Pro	Gln 350	Thr	Ala
Gln	Val	Ala 355	Ile	Pro	Gly	His	Arg 360	Gln	Leu	Gly	Pro	Thr 365	Ala	Thr	Glu
Trp	Lys 370	Asp	Gly	Leu	Cys	Thr 375	Ala	Trp	Arg	Pro	Ser 380	Ser	Ser	Ser	Gln
Ser 385	Gln	Gln	Leu	Ser	Gln 390	Arg	Phe	Phe	Cys	Met 395	Ser	His	Leu	Asn	Leu 400
Ile	Glu	Ser	Leu	His	Gln	Glu	Thr	Leu	Gly	Thr	Val	Val	Ser	Leu	Gly

420 425 430

Pro Ser Leu Arg Arg Ser Ser Arg Val Arg Val Asn Lys Met Thr Ala 435 440 445

Ile Pro Ser 450

<210> 414

<211> 150

<212> PRT

<213> Homo sapiens

<400> 414

Lys Lys His Cys Trp Tyr Phe Glu Gly Leu Tyr Pro Thr Tyr Tyr Ile
1 5 10 15

Cys Arg Ser Tyr Glu Asp Cys Cys Gly Ser Arg Cys Cys Val Arg Ala 20 25 30

Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp Phe Leu Leu Met Met Gly 35 40 45

Val Leu Phe Cys Cys Gly Ala Gly Phe Phe Ile Arg Arg Met Tyr 50 55 60

Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe Asn Val Ser Tyr Thr Arg 65 70 75 80

Gln Pro Pro Asn Pro Ala Pro Gly Ala Gln Gln Met Gly Pro Pro Tyr 85 90 95

Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro Val Gly Asn Thr Met 100 105 110

Ala Met Ala Phe Gln Val Gln Pro Asn Ser Pro His Gly Gly Thr Thr 115 120 125

Tyr Pro Pro Pro Pro Ser Tyr Cys Asn Thr Pro Pro Pro Pro Tyr Glu 130 135 140

Gln Val Val Lys Asp Lys 145 150

<210> 415 <211> 2044

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<210> 416
<211> 1269
<212> DNA
<213> Homo sapiens
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ccgc

<400> 416

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ctcagaataa ggccaagttt tatagttgca tctcagggaa gaaaatttta taggatgttt 1980 atgagttctc caataaatgc attctgcatt acataaaaaa aaaaaaaaa aaaagggcgg 2040

2044

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attotggtgg cgtatatgtt ccagagaaat gtgaattcag tacatatgcc aactaaagct 120
gtggacccag aagcattcat gaatattagt gaaatcatcc aacatcaagg ctatcctgt 180
gaggaatatg aagtcqcaac tqaaqatqqq tatatccttt ctqttaacag gattcctcqa 240
ggcctagtgc aacctaagaa gacaggttcc aggcctgtgg tgttactgca gcatggccta 300
gttggaggtg ctagcaactg gatttccaac ctgcccaaca atagcctggg cttcattctg 360
gcagatgctg gttttgacgt gtggatgggg aacagcaggg gaaacgcctg gtctcgaaaa 420
cacaagacac tctccataga ccaagatgag ttctgggctt tcagttatga tgagatggct 480
aggtttgacc ttcctgcagt gataaacttt attttgcaga aaacgggcca ggaaaagatc 540
tattatgtcg gctattcaca gggcaccacc atgggcttta ttgcattttc caccatgcca 600
gagctggctc agaaaatcaa aatgtatttt gctttagcac ccatagccac tgttaagcat 660
gcaaaaagcc ccgggaccaa atttttgttg ctgccagata tgatgatcaa gggattgttt 720
ggcaaaaaag aatttctgta tcagaccaga tttctcagac aacttgttat ttacctttgt 780
ggccaggtga ttcttgatca gatttgtagt aatatcatgt tacttctggg tggattcaac 840
accaacaata tgaacatgag ccgagcaagt gtatatgctg cccacactct tgctggaaca 900
tctgtgcaaa atattctaca ctggagccag gcagtgaatt ctggtgaact ccgggcattt 960
gactggggga gtgagaccaa aaatctggaa aaatgcaatc agccaactcc tgtaaggtac 1020
agagtcagag atatgacggt ccctacagca atgtggacag gaggtcagga ctggctttca 1080
aatccagaag acgtgaaaat gctgctctct gaggtgacca acctcatcta ccataagaat 1140
attoctgaat gggctcacgt ggatttcatc tgggqtttgq atgctcctca ccqtatqtac 1200
aatgaaatca tccatctgat gcagcaggag gagaccaacc tttcccaggg acggtgtgag 1260
gccgtattg
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<210> 417

<211> 423

<212> PRT

<213> Homo sapiens

<400> 417

Met Leu Glu Thr Leu Ser Arg Gln Trp Ile Val Ser His Arg Met Glu
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Met Trp Leu Leu Ile Leu Val Ala Tyr Met Phe Gln Arg Asn Val Asn 20 25 30

Ser Val His Met Pro Thr Lys Ala Val Asp Pro Glu Ala Phe Met Asn 35 40 45

Ile Ser Glu Ile Ile Gln His Gln Gly Tyr Pro Cys Glu Glu Tyr Glu 50 55 60

Val Ala Thr Glu Asp Gly Tyr Ile Leu Ser Val Asn Arg Ile Pro Arg 65 70 75 80

Gly Leu Val Gln Pro Lys Lys Thr Gly Ser Arg Pro Val Val Leu Leu
85 90 95

Gln His Gly Leu Val Gly Gly Ala Ser Asn Trp Ile Ser Asn Leu Pro

Asn Asn Ser Leu Gly Phe Ile Leu Ala Asp Ala Gly Phe Asp Val Trp Met Gly Asn Ser Arg Gly Asn Ala Trp Ser Arg Lys His Lys Thr Leu Ser Ile Asp Gln Asp Glu Phe Trp Ala Phe Ser Tyr Asp Glu Met Ala Arg Phe Asp Leu Pro Ala Val Ile Asn Phe Ile Leu Gln Lys Thr Gly Gln Glu Lys Ile Tyr Tyr Val Gly Tyr Ser Gln Gly Thr Thr Met Gly Phe Ile Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Lys Ile Lys Met Tyr Phe Ala Leu Ala Pro Ile Ala Thr Val Lys His Ala Lys Ser Pro Gly Thr Lys Phe Leu Leu Pro Asp Met Met Ile Lys Gly Leu Phe Gly Lys Lys Glu Phe Leu Tyr Gln Thr Arg Phe Leu Arg Gln Leu Val Ile Tyr Leu Cys Gly Gln Val Ile Leu Asp Gln Ile Cys Ser Asn Ile Met Leu Leu Gly Gly Phe Asn Thr Asn Asn Met Asn Met Ser Arg Ala Ser Val Tyr Ala Ala His Thr Leu Ala Gly Thr Ser Val Gln Asn Ile Leu His Trp Ser Gln Ala Val Asn Ser Gly Glu Leu Arg Ala Phe Asp Trp Gly Ser Glu Thr Lys Asn Leu Glu Lys Cys Asn Gln Pro Thr Pro Val Arg Tyr Arg Val Arg Asp Met Thr Val Pro Thr Ala Met Trp

Thr Gly Gly Gln Asp Trp Leu Ser Asn Pro Glu Asp Val Lys Met Leu

355 360 365

Leu Ser Glu Val Thr Asn Leu Ile Tyr His Lys Asn Ile Pro Glu Trp 370 375 380

Ala His Val Asp Phe Ile Trp Gly Leu Asp Ala Pro His Arg Met Tyr 385 390 395 400

Asn Glu Ile Ile His Leu Met Gln Gln Glu Glu Thr Asn Leu Ser Gln 405 410 415

Gly Arg Cys Glu Ala Val Leu 420

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<211> 33

<212> PRT

<213> Homo sapiens

<400> 418

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<210> 419

<211> 390

<212> PRT

<213> Homo sapiens

<400> 419

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Ala Thr Glu Asp Gly Tyr Ile Leu Ser Val Asn Arg Ile Pro Arg Gly 35 40 45

Leu Val Gln Pro Lys Lys Thr Gly Ser Arg Pro Val Val Leu Leu Gln 50 55 60

His 65	Gly	Leu	Val	Gly	Gly 70	Ala	Ser	Asn	Trp	Ile 75	Ser	Asn	Leu	Pro	Asn 80
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Ile	Asp	Gln 115	Asp	Glu	Phe	Trp	Ala 120	Phe	Ser	Tyr	Asp	Glu 125	Met	Ala	Arg
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Tyr 225	Leu	Cys	Gly	Gln	Val 230	Ile	Leu	Asp	Gln	Ile 235	Cys	Ser	Asn	Ile	Met 240
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Trp	Gly 290	Ser	Glu	Thr	Lys	Asn 295	Leu	Glu	Lys	Cys	Asn 300	Gln	Pro	Thr	Pro
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Gly Gly Gln Asp Trp Leu Ser Asn Pro Glu Asp Val Lys Met Leu Leu 325 330 335

Ser Glu Val Thr Asn Leu Ile Tyr His Lys Asn Ile Pro Glu Trp Ala 340 345 350

His Val Asp Phe Ile Trp Gly Leu Asp Ala Pro His Arg Met Tyr Asn 355 360 365

Glu Ile Ile His Leu Met Gln Glu Glu Glu Thr Asn Leu Ser Gln Gly $370 \hspace{1cm} 375 \hspace{1cm} 380$

Arg Cys Glu Ala Val Leu 385 390

<210> 420

<211> 221

<212> PRT

<213> Homo sapiens

<400> 420

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Ala Thr Glu Asp Gly Tyr Ile Leu Ser Val Asn Arg Ile Pro Arg Gly
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Leu Val Gln Pro Lys Lys Thr Gly Ser Arg Pro Val Val Leu Leu Gln 50 55 60

His Gly Leu Val Gly Gly Ala Ser Asn Trp Ile Ser Asn Leu Pro Asn 65 70 75 80

Asn Ser Leu Gly Phe Ile Leu Ala Asp Ala Gly Phe Asp Val Trp Met 85 90 95

Gly Asn Ser Arg Gly Asn Ala Trp Ser Arg Lys His Lys Thr Leu Ser 100 105 110

Ile Asp Gln Asp Glu Phe Trp Ala Phe Ser Tyr Asp Glu Met Ala Arg 115 120 125

Phe Asp Leu Pro Ala Val Ile Asn Phe Ile Leu Gln Lys Thr Gly Gln

130 135 140

Glu Lys Ile Tyr Tyr Val Gly Tyr Ser Gln Gly Thr Thr Met Gly Phe 145 150 155 160

Ile Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Lys Ile Lys Met Tyr 165 170 175

Phe Ala Leu Ala Pro Ile Ala Thr Val Lys His Ala Lys Ser Pro Gly
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Lys Lys Glu Phe Leu Tyr Gln Thr Arg Phe Leu Arg Gln 210 215 220

<210> 421

<211> 25

<212> PRT

<213> Homo sapiens

<400> 421

Leu Val Ile Tyr Leu Cys Gly Gln Val Ile Leu Asp Gln Ile Cys Ser

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Asn Ile Met Leu Leu Gly Gly Phe
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<210> 422

<211> 144

<212> PRT

<213> Homo sapiens

<400> 422

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35 40 45

Asn Leu Glu Lys Cys Asn Gln Pro Thr Pro Val Arg Tyr Arg Val Arg 50 55 60

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<400> 425

<211> 343

<212> PRT

<213> Homo sapiens

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Ser 225	Met	Ala	Thr	Ser	Leu 230	Thr	Ser	Pro	Cys	Pro 235	Leu	His	Leu	Gly	Ala 240
Ser	Val	Leu	His	Thr 245	His	His	Gly	Pro	Ala 250	Phe	Trp	Ile	Thr	Leu 255	Thr

Thr Gly Leu Leu Cys Val Leu Leu Gly Leu Ala Met Ala Val Ala His 260 265 Arg Met Gln Pro His Arg Leu Lys Ala Phe Phe Asn Gln Ser Val Asp 275 280 Glu Asp Pro Met Leu Glu Trp Ser Pro Glu Glu Gly Gly Leu Leu Ser 290 295 300 Pro Arg Tyr Arg Ser Met Ala Asp Ser Pro Lys Ser Gln Asp Ile Pro 305 310 315 320 Leu Ser Glu Ala Ser Ser Thr Lys Ala Tyr Cys Lys Glu Ala His Pro 325 330 335 Lys Asp Pro Asp Cys Ala Leu 340

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Thr Phe Pro Met Asp Thr Thr 20

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<211> 112

<212> PRT

<213> Homo sapiens

<400> 427

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Val Gly Leu Gly Gly Val Asn Ile Thr Leu Thr Gly Thr Pro Val Gln 35 40 45

Gln Leu Asn Glu Thr Ile Asn Tyr Asn Glu Glu Phe Thr Trp Arg Leu

50 55 60

Gly Glu Asn Tyr Ala Glu Glu Cys Ala Lys Ala Leu Glu Lys Gly Leu 65 70 75 80

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Cys Gly Leu Tyr Arg Gln Tyr Arg Leu Ala Gly His Tyr Thr Ser Ala 100 105 110

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<212> PRT

<213> Homo sapiens

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His Thr His His Gly Pro

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Val Ile Leu

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<213> Homo sapiens

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gactteteta aatgtggget etggetteag aeteeteage caaaagetet tgaagateaa 3960
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<211> 1410
<212> DNA
<213> Mus sp.
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<400> 438

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<210> 439

<211> 470

<212> PRT

<213> Mus sp.

<400> 439

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Thr Leu Ala Arg Pro Ala Pro Gly Pro Arg Ser Gly Pro Glu Cys
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Phe Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Ser Trp Thr Ala 35 40 45

Leu Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His
50 55 60

Pro Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu 65 70 75 80

His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr 85 90 95

Val Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro 100 105 110

Ala Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn 115 120 125

Pro	Pro 130	Pro	Leu	Thr	Gly	Thr 135	Ser	Lys	Thr	Ser	Asn 140	Lys	Leu	Thr	Ile
Gln 145	Thr	Cys	Ile	Ser	Phe 150	Cys	Arg	Ser	Gln	Arg 155	Phe	Lys	Phe	Ala	Gly 160
Met	Glu	Ser	Gly	Tyr 165	Ala	Cys	Phe	Cys	Gly 170	Asn	Asn	Pro	Asp	Tyr 175	Trp
Lys	His	Gly	Glu 180	Ala	Ala	Ser	Thr	Glu 185	Cys	Asn	Ser	Val	Cys 190	Phe	Gly
Asp	His	Thr 195	Gln	Pro	Cys	Gly	Gly 200	Asp	Gly	Arg	Ile	Ile 205	Leu	Phe	Asp
Thr	Leu 210	Val	Gly	Ala	Cys	Gly 215	Gly	Asn	Tyr	Ser	Ala 220	Met	Ala	Ala	Val
Val 225	Tyr	Ser	Pro	Asp	Phe 230	Pro	Asp	Thr	Tyr	Ala 235	Thr	Gly	Arg	Val	Cys 240
Tyr	Trp	Thr	Ile	Arg 245	Val	Pro	Gly	Ala	Ser 250	Arg	Ile	His	Phe	Asn 255	Phe
Thr	Leu	Phe	Asp 260	Ile	Arg	Asp	Ser	Ala 265	Asp	Met	Val	Glu	Leu 270	Leu	Asp
Gly	Tyr	Thr 275	His	Arg	Val	Leu	Val 280	Arg	Leu	Ser	Gly	Arg 285	Ser	Arg	Pro
Pro	Leu 290	Ser	Phe	Asn	Val	Ser 295	Leu	Asp	Phe	Val	Ile 300	Leu	Tyr	Phe	Phe
Ser 305	Asp	Arg	Ile	Asn	Gln 310	Ala	Gln	Gly	Phe	Ala 315	Val	Leu	Tyr	Gln	Ala 320
Thr	Lys	Glu	Glu	Pro 325	Pro	Gln	Glu	Arg	Pro 330	Ala	Val	Asn	Gln	Thr 335	Leu
Ala	Glu	Val	Ile 340	Thr	Glu	Gln	Ala	Asn 345	Leu	Ser	Val	Ser	Ala 350	Ala	His
Ser	Ser	Lys 355	Val	Leu	Tyr	Val	Ile 360	Thr	Pro	Ser	Pro	Ser 365	His	Pro	Pro
Gln	Thr 370	Ala	Gln	Val	Ala	Ile 375	Pro	Gly	His	Arg	Gln 380	Leu	Gly	Pro	Thr

Ala Thr Glu Trp Lys Asp Gly Leu Cys Thr Ala Trp Arg Pro Ser Ser Ser Ser Gln Ser Gln Gln Leu Ser Gln Arg Phe Phe Cys Met Ser His Leu Asn Leu Ile Glu Ser Leu His Gln Glu Thr Leu Gly Thr Val Val Ser Leu Gly Leu Leu Glu Ile Ser Gly Pro Phe Ser Met Asn Leu Pro Leu Gln Ser Pro Ser Leu Arg Arg Ser Ser Arg Val Arg Val Asn Lys Met Thr Ala Ile Pro Ser <210> 440 <211> 760 <212> PRT <213> Mus sp. <400> 440 Met Ala Leu Pro Ser Leu Gly Gln Asp Ser Trp Ser Leu Leu Arg Val Phe Phe Phe Gln Leu Phe Leu Leu Pro Ser Leu Pro Pro Ala Ser Gly Thr Gly Gly Gln Gly Pro Met Pro Arg Val Lys Tyr His Ala Gly Asp Gly His Arg Ala Leu Ser Phe Phe Gln Gln Lys Gly Leu Arg Asp Phe Asp Thr Leu Leu Ser Asp Asp Gly Asn Thr Leu Tyr Val Gly Ala Arg Glu Thr Val Leu Ala Leu Asn Ile Gln Asn Pro Gly Ile Pro Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Glu Arg Lys Lys Thr Glu

Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe Ile

Arg	Val 130	Leu	Val	Ser	Tyr	Asn 135	Ala	Thr	His	Leu	Tyr 140	Ala	Cys	Gly	Thr
Phe 145	Ala	Phe	Ser	Pro	Ala 150	Cys	Thr	Phe	Ile	Glu 155	Leu	Gln	Asp	Ser	Leu 160
Leu	Leu	Pro	Ile	Leu 165	Ile	Asp	Lys	Val	Met 170	Asp	Gly	Lys	Gly	Gln 175	Ser
Pro	Leu	Thr	Leu 180	Phe	Thr	Ser	Thr	Gln 185	Ala	Val	Leu	Val	Asp 190	Gly	Met
Leu	Tyr	Ser 195	Gly	Thr	Met	Asn	Asn 200	Phe	Leu	Gly	Ser	Glu 205	Pro	Ile	Leu
Met	Arg 210	Thr	Leu	Gly	Ser	His 215	Pro	Val	Leu	Lys	Thr 220	Asp	Ile	Phe	Leu
Arg 225	Trp	Leu	His	Ala	Asp 230	Ala	Ser	Phe	Val	Ala 235	Ala	Ile	Pro	Ser	Thr 240
Gln	Val	Val	Tyr	Phe 245	Phe	Phe	Glu	Glu	Thr 250	Ala	Ser	Glu	Phe	Asp 255	Phe
Phe	Glu	Glu	Leu 260	Tyr	Ile	Ser	Arg	Val 265	Ala	Gln	Val	Cys	Lys 270	Asn	Asp
Val	Gly	Gly 275	Glu	Lys	Leu	Leu	Gln 280	Lys	Lys	Trp	Thr	Thr 285	Phe	Leu	Lys
Ala	Gln 290	Leu	Leu	Cys	Ala	Gln 295	Pro	Gly	Gln	Leu	Pro 300	Phe	Asn	Ile	Ile
Arg 305	His	Ala	Val	Leu	Leu 310	Pro	Ala	Asp	Ser	Pro 315	Ser	Val	Ser	Arg	Ile 320
Tyr	Ala	Val	Phe	Thr 325	Ser	Gln	Trp	Gln	Val 330	Gly	Gly	Thr	Arg	Ser 335	Ser
Ala	Val	Cys	Ala 340	Phe	Ser	Leu	Thr	Asp 345	Ile	Glu	Arg	Val	Phe 350	Lys	Gly
Lys	Tyr	Lys 355	Glu	Leu	Asn	Lys	Glu 360	Thr	Ser	Arg	Trp	Thr 365	Thr	Tyr	Arg
Gly	Ser 370	Glu	Val	Ser	Pro	Arg 375	Pro	Gly	Ser	Cys	Ser 380	Met	Gly	Pro	Ser

Ser 385	Asp	Lys	Ala	Leu	Thr 390	Phe	Met	Lys	Asp	His 395	Phe	Leu	Met	Asp	Glu 400
His	Val	Val	Gly	Thr 405	Pro	Leu	Leu	Val	Lys 410	Ser	Gly	Val	Glu	Tyr 415	Thr
Arg	Leu	Ala	Val 420	Glu	Ser	Ala	Arg	Gly 425	Leu	Asp	Gly	Ser	Ser 430	His	Val
Val	Met	Tyr 435	Leu	Gly	Thr	Ser	Thr 440	Gly	Pro	Leu	His	Lys 445	Ala	Val	Val
Pro	Gln 450	Asp	Ser	Ser	Ala	Tyr 455	Leu	Val	Glu	Glu	Ile 460	Gln	Leu	Ser	Pro
Asp 465	Ser	Glu	Pro	Val	Arg 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Ala	Gln	Gly	Ala 480
Val	Phe	Ala	Gly	Phe 485	Ser	Gly	Gly	Ile	Trp 490	Arg	Val	Pro	Arg	Ala 495	Asn
Cys	Ser	Val	Tyr 500	Glu	Ser	Cys	Val	Asp 505	Cys	Val	Leu	Ala	Arg 510	Asp	Pro
His	Cys	Ala 515	Trp	Asp	Pro	Glu	Ser 520	Arg	Leu	Cys	Ser	Leu 525	Leu	Ser	Gly
Ser	Thr 530	Lys	Pro	Trp	Lys	Gln 535	Asp	Met	Glu	Arg	Gly 540	Asn	Pro	Glu	Trp
Val 545	Cys	Thr	Arg	Gly	Pro 550	Met	Ala	Arg	Ser	Pro 555	Arg	Arg	Gln	Ser	Pro 560
Pro	Gln	Leu	Ile	Lys 565	Glu	Val	Leu	Thr	Val 570	Pro	Asn	Ser	Ile	Leu 575	Glu
Leu	Arg	Cys	Pro 580	His	Leu	Ser	Ala	Leu 585	Ala	Ser	Tyr	His	Trp 590	Ser	His
Gly	Arg	Ala 595	Lys	Ile	Ser	Glu	Ala 600	Ser	Ala	Thr	Val	Tyr 605	Asn	Gly	Ser
Leu	Leu 610	Leu	Leu	Pro	Gln	Asp 615	Gly	Val	Gly	Gly	Leu 620	Tyr	Gln	Cys	Val
Ala 625	Thr	Glu	Asn	Gly	Tyr 630	Ser	Tyr	Pro	Val	Val 635	Ser	Tyr	Trp	Val	Asp 640

Ser Gln Asp Gln Pro Leu Ala Leu Asp Pro Glu Leu Ala Gly Val Pro 645 650 655

Arg Glu Arg Val Gln Val Pro Leu Thr Arg Val Gly Gly Ala Ser 660 665 670

Met Ala Ala Gln Arg Ser Tyr Trp Pro His Phe Leu Ile Val Thr Val 675 680 685

Leu Leu Ala Ile Val Leu Leu Gly Val Leu Thr Leu Leu Leu Ala Ser 690 695 700

Pro Leu Gly Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Gly Met 705 710 715 720

Leu Pro Pro Arg Glu Lys Ala Pro Leu Ser Arg Asp Gln His Leu Gln 725 730 735

Pro Ser Lys Asp His Arg Thr Ser Ala Ser Asp Val Asp Ala Asp Asn 740 745 750

Asn His Leu Gly Ala Glu Val Ala 755 760

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<211> 3046

<212> PRT

<213> Mus sp.

<400> 441

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Ala Cys Cys Ala Thr Cys Thr Cys Ala Gly Gly Cys Thr Gly Ala Cys
50 55 60

Cys Ala Thr Gly Gly Cys Cys Cys Thr Ala Cys Cys Ala Thr Cys Cys 65 70 75 80

Cys Thr Gly Gly Cys Cys Ala Gly Gly Ala Cys Thr Cys Ala Thr

85	90	95

Gly	Gly	Ala	Gly 100	Thr	Cys	Thr	Cys	Cys 105	Thr	Gly	Cys	Gly	Thr 110	Gly	Thr
Thr	Thr	Thr 115	Thr	Thr	Thr	Cys	Thr 120	Thr	Cys	Cys	Ala	Ala 125	Cys	Thr	Cys
Thr	Thr 130	Cys	Cys	Thr	Gly	Cys 135	Thr	Gly	Cys	Cys	Ala 140	Thr	Cys	Ala	Cys
Thr 145	Gly	Cys	Cys	Ala	Cys 150	Cys	Thr	Gly	Cys	Thr 155	Thr	Cys	Thr	Gly	Gl ₃ 160
Gly	Ala	Cys	Thr	Gly 165	Gly	Thr	Gly	Gly	Thr 170	Cys	Ala	Gly	Gly	Gly 175	Gly
Cys	Cys	Cys	Ala 180	Thr	Gly	Cys	Cys	Cys 185	Ala	Gly	Ala	Gly	Thr 190	Cys	Ala
Ala	Ala	Thr 195	Ala	Cys	Cys	Ala	Thr 200	Gly	Cys	Thr	Gly	Gly 205	Ala	Gly	Ala
Cys	Gly 210	Gly	Gly	Cys	Ala	Cys 215	Ala	Gly	Gly	Gly	Cys 220	Cys	Cys	Thr	Cys
Ala 225	Gly	Cys	Thr	Thr	Cys 230	Thr	Thr	Cys	Cys	Ala 235	Ala	Cys	Ala	Ala	Ala 240
Ala	Ala	Gly	Gly	Cys 245	Cys	Thr	Cys	Cys	Gly 250	Ala	Gly	Ala	Cys	Thr 255	Thr
Thr	Gly	Ala	Cys 260	Ala	Cys	Gly	Cys	Thr 265	Gly	Cys	Thr	Cys	Cys 270	Thr	Gly
Ala	Gly	Thr 275	Gly	Ala	Суѕ	Gly	Ala 280	Thr	Gly	Gly	Cys	Ala 285	Ala	Cys	Ala
Cys	Thr 290	Суѕ	Thr	Cys	Thr	Ala 295	Thr	Gly	Thr	Gly	Gly 300	Gly	Gly	Gly	Cys
Thr 305	Cys	Gly	Ala	Gly	Ala 310	Gly	Ala	Cys	Cys	Gly 315	Thr	Cys	Cys	Thr	Gly 320
Gly	Cys	Cys	Thr	Thr 325	Gly	Ala	Ala	Thr	Ala 330	Thr	Cys	Cys	Ala	Gly 335	Ala

Ala Cys Cys Cys Ala Gly Gly Ala Ala Thr Cys Cys Cys Ala Ala Gly

340	345	350

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Cys	Cys 370	Cys	Thr	Gly	Gly	Cys 375	Cys	Ala	Gly	Cys	Cys 380	Ala	Gly	Thr	Gly
Ala 385	Gly	Ala	Gly	Ala	Ala 390	Ala	Ala	Ala	Ala	Gly 395	Ala	Cys	Cys	Gly	Ala 400
Ala	Thr	Gly	Thr	Gly 405	Cys	Cys	Thr	Thr	Thr 410	Ala	Ala	Gly	Ala	Ala 415	Gly
Ala	Ala	Gly	Ala 420	Gly	Cys	Ala	Ala	Thr 425	Gly	Ala	Gly	Ala	Cys 430	Ala	Cys
Ala	Gly	Thr 435	Gly	Thr	Thr	Thr	Cys 440	Ala	Ala	Cys	Thr	Thr 445	Cys	Ala	Thr
Thr	Cys 450	Gly	Ala	Gly	Thr	Cys 455	Cys	Thr	Gly	Gly	Thr 460	Cys	Thr	Cys	Thr
Thr 465	Ala	Cys	Ala	Ala	Thr 470	Gly	Cys	Thr	Ala	Cys 475	Thr	Cys	Ala	Cys	Cys 480
Thr	Cys	Thr	Ala	Thr 485	Gly	Cys	Cys	Thr	Gly 490	Thr	Gly	Gly	Gly	Ala 495	Cys
Cys	Thr	Thr	Thr 500	Gly	Cys	Cys	Thr	Thr 505	Cys	Ala	Gly	Cys	Cys 510	Cys	Thr
Gly	Cys	Cys 515	Thr	Gly	Thr	Ala	Cys 520	Cys	Thr	Thr	Cys	Ala 525	Thr	Thr	Gly
Ala	Ala 530	Cys	Thr	Cys	Cys	Ala 535	Ala	Gly	Ala	Thr	Thr 540	Cys	Cys	Cys	Thr
Cys 545	Cys	Thr	Gly	Thr	Thr 550	Gly	Cys	Суѕ	Cys	Ala 555	Thr	Cys	Thr	Thr	Gly 560
Ala	Thr	Ala	Gly	Ala 565	Cys	Ala	Ala	Gly	Gly 570	Thr	Cys	Ala	Thr	Gly 575	Gly
Ala	Суѕ	Gly	Gly 580	Gly	Ala	Ala	Gly	Gly 585	Gly	Cys	Cys	Ala	Ala 590	Ala	Gly

Cys Cys Cys Thr Thr Thr Gly Ala Cys Cys Cys Thr Gly Thr Thr Cys

Ala Cys Ala Ala Gly Cys Ala Cys Ala Cys Ala Ala Gly Cys Thr Gly Thr Cys Thr Thr Gly Gly Thr Cys Gly Ala Thr Gly Gly Gly Ala Thr Gly Cys Thr Thr Thr Ala Thr Thr Cys Cys Gly Gly Cys Ala Cys Cys Ala Thr Gly Ala Ala Cys Ala Ala Cys Thr Thr Cys Cys Thr Gly Gly Gly Cys Ala Gly Cys Gly Ala Gly Cys Cys Cys Ala Thr Cys Cys Thr Gly Ala Thr Gly Cys Gly Gly Ala Cys Ala Cys Thr Gly Gly Gly Ala Thr Cys Cys Cys Ala Thr Cys Cys Thr Gly Thr Thr Cys Thr Cys Ala Ala Gly Ala Cys Thr Gly Ala Cys Ala Thr Cys Thr Thr Cys Thr Thr Ala Cys Gly Cys Thr Gly Gly Cys Thr Gly Cys Ala Cys Gly Cys Gly Gly Ala Thr Gly Cys Cys Thr Cys Cys Thr Thr Cys Gly Thr Gly Gly Cys Ala Gly Cys Cys Ala Thr Thr Cys Cys Ala Thr Cys Cys Ala Cys Cys Cys Ala Gly Gly Thr Cys Gly Thr Cys Thr Ala Thr Thr Thr Cys Thr Thr Cys Thr Thr Gly Ala Gly Gly Ala Gly Ala Cys Ala Gly Cys Cys Ala Gly Cys Gly Ala Gly Thr Thr Thr Gly Ala Cys Thr Thr Cys Thr Thr Gly Ala Ala Gly Ala Gly Cys Thr Gly Thr Ala Thr

Ala Thr Ala Thr Cys Cys Ala Gly Gly Gly Thr Gly Gly Cys Thr Cys

Ala	Ala	Gly	Thr	Cys	Thr	Gly	Cys	Ala	Ala	Gly	Ala	Ala	Cys	Gly	Ala
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- Gly Gly Ala Cys Cys Ala Cys Cys Thr Thr Cys Cys Thr Cys Ala Ala
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- Gly Cys Thr Cys Ala Gly Cys Cys Ala Gly Gly Gly Cys Ala Gly Cys
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- Gly Cys Gly Gly Gly Ala Cys Cys Ala Gly Gly Ala Gly Cys Thr Cys
- Ala Gly Cys Ala Gly Thr Cys Thr Gly Thr Gly Cys Cys Thr Thr Cys
- Thr Cys Thr Cys Ala Cys Gly Gly Ala Cys Ala Thr Thr Gly
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- Gly Ala Ala Gly Thr Ala Cys Ala Ala Gly Gly Ala Gly Cys Thr Gly 1125 1130 1135
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- Thr Cys Ala Cys Thr Gly Thr Gly Cys Cys Thr Gly Gly Ala Cys 1605 1610 1615
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- Gly Cys Ala Gly Cys Cys Thr Thr Cys Thr Gly Thr Cys Thr Gly Gly 1635 1640 1645
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- Ala Ala Gly Cys Ala Gly Gly Ala Cys Ala Thr Gly Gly Ala Ala Cys 1665 1670 1675 1680
- Gly Cys Gly Gly Cys Ala Ala Cys Cys Cys Gly Gly Ala Gly Thr Gly 1685 1690 1695
- Gly Gly Thr Ala Thr Gly Cys Ala Cys Cys Cys Gly Thr Gly Gly Cys 1700 1705 1710
- Cys Cys Cys Ala Thr Gly Gly Cys Cys Ala Gly Gly Ala Gly Cys Cys 1715, 1720 1725
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- Gly Cys Thr Gly Cys Gly Cys Thr Gly Cys Cys Cys Cys Ala Cys 1795 1800 1805
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- Cys Thr Thr Ala Cys Cys Ala Cys Thr Gly Gly Ala Gly Thr Cys Ala 1825 1830 1835 1840
- Thr Gly Gly Cys Cys Gly Ala Gly Cys Cys Ala Ala Ala Ala Thr Cys 1845 1850 1855
- Thr Cys Ala Gly Ala Ala Gly Cys Cys Thr Cys Thr Gly Cys Thr Ala 1860 1865 1870
- Cys Cys Gly Thr Cys Thr Ala Cys Ala Ala Thr Gly Gly Cys Thr Cys

1875

Cys Cys Thr Cys Thr Gly Cys Thr Gly Cys Thr Gly Cys Gly 1890 1895 1900

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- Gly Cys Cys Thr Cys Thr Ala Cys Cys Ala Gly Thr Gly Thr 1925 1930 1935
- Gly Gly Cys Gly Ala Cys Thr Gly Ala Gly Ala Ala Cys Gly Gly Cys 1940 1945 1950
- Thr Ala Cys Thr Cys Ala Thr Ala Cys Cys Cys Thr Gly Thr Gly Gly 1955 1960 1965
- Thr Cys Thr Cys Cys Thr Ala Thr Thr Gly Gly Gly Thr Ala Gly Ala 1970 1975 1980
- Cys Ala Gly Cys Cys Ala Gly Gly Ala Cys Cys Ala Gly Cys Cys 1985 1990 1995 2000
- Cys Thr Gly Gly Cys Gly Cys Thr Gly Gly Ala Cys Cys Cys Thr Gly
 2005 2010 2015
- Ala Gly Cys Thr Gly Gly Cys Gly Gly Cys Gly Thr Thr Cys Cys 2020 2025 2030
- Cys Cys Gly Thr Gly Ala Gly Cys Gly Thr Gly Thr Gly Cys Ala Gly
 2035 2040 2045
- Gly Thr Cys Cys Cys Gly Cys Thr Gly Ala Cys Cys Ala Gly Gly 2050 2055 2060
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- Cys Ala Thr Gly Cys Thr Gly Cys Cys Cys Ala Gly Cys Gly Gly 2085 2090 2095
- Thr Cys Cys Thr Ala Cys Thr Gly Gly Cys Cys Cys Cys Ala Thr Thr 2100 2105 2110
- Thr Thr Cys Thr Cys Ala Thr Cys Gly Thr Thr Ala Cys Cys Gly Thr 2115 2120 2125
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2130

Cys Thr Cys Cys Thr Gly Gly Gly Ala Gly Thr Gly Cys Thr Cys Ala 2145 2150 2155 2160

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Thr Gly Ala Cys Cys Cys Thr Thr Gly Ala Cys Cys Thr Cys Thr Thr 2945 2950 2955 2960

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- Pro Tyr Gly Lys Lys Asn Ser Gly Asn Thr Gly Gln Arg Pro Val Val 65 70 75 80
- Phe Leu Gln His Gly Leu Leu Ala Ser Ala Thr Asn Trp Ile Ser Asn 85 90 95
- Leu Pro Asn Asn Ser Leu Ala Phe Ile Leu Ala Asp Ala Gly Tyr Asp 100 105 110
- Val Trp Leu Gly Asn Ser Arg Gly Asn Thr Trp Ala Arg Arg Asn Leu 115 120 125
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Phe 145	Ala	Phe	Ser	Pro	Ala 150	Cys	Thr	Phe	Ile	Glu 155	Leu	Gln	Asp	Ser	Leu 160
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Ala Thr Glu Asn Gly Tyr Ser Tyr Pro Val Val Ser Tyr Trp Val Asp 625 635 635

Ser Gln Asp Gln Pro Leu Ala Leu Asp Pro Glu Leu Ala Gly Val Pro 645 650 655

Arg Glu Arg Val Gln Val Pro Leu Thr Arg Val Gly Gly Gly Ala Ser 660 665 670

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Leu Pro Pro Arg Glu Lys Ala Pro Leu Ser Arg Asp Gln His Leu Gln 725 730 735

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Val Cys Arg Gln Leu Gly Cys Gly Ala Ala Ile Gly Phe Pro Gly Gly 65 70 75 80

Ala Tyr Phe Gly Pro Gly Leu Gly Pro Ile Trp Leu Leu Tyr Thr Ser 85 90 95

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Lys Asp Tyr Arg Asn Asp Gly Tyr Asn His Gly Arg Asp Ala Gly Val 115 120 125

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Cys Gly Lys Ala Val Ser Val Leu Gly His Glu Leu Phe Arg Glu Ser 180 185 190

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Glu Leu Trp Val Cys Pro Arg Val Pro Cys Pro Gly Gly Thr Cys His 210 215 220

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Met Thr Asp Val Pro Asp Glu Asn Tyr Asp Asp Ala Glu Glu Val Pro 1345 1350 1355 1360

Val Pro Gly Thr Pro Ser Pro Ser Gln Gly Asn Glu Glu Glu Val Pro 1365 1370 1375

Pro Glu Lys Glu Asp Gly Val Arg Ser Ser Gln Thr Gly Ser Phe Leu 1380 1385 1390

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<223> Description of Artificial Sequence: Domain
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<223> Residue 1 is L or I or V
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<223> Residue 2 is any amino acid residue
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<223> Residue 3 is L or I or V
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     when present, each of residues 4 and 5 is any
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<223> Residue 7 is any amino acid residue

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<223> Residue 10 is N or H
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<223> Each of residues is any amino acid residue
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<223> One or both of residues 6 and 7 can be present;
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<223> Residue 8 is P or E
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<223> Each of residues 9 and 10 is any amino acid
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<223> Residue 11 is L, I, V, M, F, or Y
<223> Residue 12 is D, E, N, Q, or S
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<223> Residue 13 is S, T, or A
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<223> Residue 14 is A or V
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<223> Residue 15 is L, I, V, M, F, or Y
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<223> Each of residues 2 and 3 is any amino acid residue
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<223> Residue 6 is L, I, V, M, F, Y, or W
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<223> Residue 7 is D, E, G, H, R, K, or P
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<223> Residue 9 is any amino acid residue
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<223> Residue 10 is L, I, V, M, F, Y, W, G, S, P, or Q
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<211> 8
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<223> Residue 5 is any amino acid residue
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<223> Residue 7 is D or R
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<223> Residue 8 is L, I, V, S, A, P, K, or Q
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<223> Each of residues 1-12, 14-16, 18, 27, and 29-37 is
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<223> Residue 26 is D, E, or N
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<223> Residue 28 is L, I, V, M, F, or Y
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30

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<223> Residue 6 is D, N, or R
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<210> 456
<211> 38
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<223> Each of residues 2-6, 8, 9, 11-16, 22-24, 26-33,
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\langle 223 \rangle Residue 25 is F, Y, or W
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<223> Residue 13 can be absent; when present, it is any amino acid residue

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<223> Residue 12 is L, I, V, or M

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<223> Residue 14 is E, Q, or K

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Leu His Leu Pro Ala Leu

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<210> 459

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 Region of INTERCEPT 217

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Ala Ala Thr Ala Asp Leu

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<210> 460

<211> 22

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<223> Description of Artificial Sequence:Leucine Zipper
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1 5 10 15

Ser Glu Tyr Pro Asp Leu